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Constructing an identity. The work and world of polytechnic trade tutors in New Zealand

Lisa Maurice-Takerei

Abstract

Vocational education in New Zealand has recently experienced an upsurge in interest. Trade related education has become an area of focus in terms of government funding and educational policy in both the secondary schooling and tertiary education and training sectors. Despite this we know little about the world of tertiary trade education or the educators whose everyday work involves the skilling and upskilling of a future trade workforce.

Tertiary level vocational education on the whole has received little research attention. Possibly this is a result of the complex, complicated and multi-layered environment in which it takes place. Yet tertiary trade-focused education serves multiple purposes and stakeholders and is at the centre of discussion relating to industry skill gaps, social development goals, trades academies in schools, global labour markets, national educational qualification standards and workforce development.

This research presents the tensions in the world of work of trade tutors working in polytechnic environments in New Zealand and is primarily concerned with unravelling and illuminating this complex world of work. The thesis explores the identities of trade tutors as educators and contributors to a skilled 21st century workforce and offers possibilities for an agentic educator workforce that is part of the solution for a ‘skilled’ New Zealand.
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Dedication

For Sonny, Harry and Mary Jane

and

John Francis Bolton
1959 - 2011
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Glossary

AAVA                  Authority for Advanced Vocational Awards
ALNAT                Adult Literacy and Numeracy Assessment Tool
AMAP                  Accreditation and Moderation Action Plans
ARTT                  Applied and Related Trade Training
ETSA                  Education Training and Support Agency
ITP                   Institute of Technology and Polytechnic
ITO                   Industry Training Organisation
ITF                   Industry Training Federation
LLN                   Language Literacy and Numeracy
MoE                   Ministry of Education
NCAL                  National Certificate in Adult Literacy and Numeracy
NCVER                 National Centre for Vocational Education and Research
NZC                   New Zealand Curriculum
NZQA                  New Zealand Qualifications Authority
PCET                  Post Compulsory Education and Training
PTE                   Private Training Establishment
TAFE                  Technical and Further Education
TEC                   Tertiary Education Commission
TES                   Tertiary Education Strategy
TCB                   Trade Certification Board
TEO                   Tertiary Education Organisation
TIME                  Theoretically informed methodological ethnography
TRoQ                  Targeted Review of Qualifications
TVET                  Technical and Vocational Education
VET                   Vocational Education and Training
VTC                   Vocational Training Council
Whakapapa            The recitation of a genealogy; establishing identity by naming relationships
Whanaungatanga       A relationship through shared experiences and working together which provides people with a sense of belonging.
Chapter 1. Introduction

This study is concerned with trade tutors. It investigates trade teaching and trade-related education in the tertiary, or post-school educational environment in New Zealand. The primary task of the thesis is to highlight the work and world of tertiary, polytechnic employed vocational trade tutors in New Zealand as the skill and knowledge builders for a new generation of skilled tradespeople. The ways in which tradespeople become teachers, and the mechanisms that might support a successful transition to ‘teacher’ or ‘tutor’, are considered.

At its outset, the study set out to explore trade tutors’ perspectives on their work; trade training and education in general, standards and the curriculum, the development and delivery of trade qualifications and student skill and knowledge development in the area of trade learning and teaching. The scope of the study rapidly expanded to include the range of concerns that impact on the work of trade tutors. The study responds to the suggestion that there is little scholarship in the area of vocational education and the roles and identities of educators (Figgis, 2009).

In order to understand this world of work it was necessary to investigate the complex field that surrounds it and that which sits behind it. The challenge was to contain the inquiry focus in the knowledge that the work and world of the trade tutor overlaps with a number of other domains, each worthy of inquiry and valuable to this research. Digressions into related areas became necessary and so are present within this thesis, although my intention is to keep these short and relevant.

The field of study

In considering trade tutors the study sought to identify the place of, and for, trade education – an unrecognized space between industry training, schooling and employment. It does this by presenting the perceptions and work of tertiary trade tutors as a particular occupational group who have a strong history and who engage in specific cultural practices that are part of their work and identity. This is an environment which is
identified as contributing to a skilled workforce, healthy economy and an engaged population, yet it is made up of an occupational group that is barely visible and not often heard who undertake their work in an unsettled occupational space that sits between education, training and work.

The study focused on the working world of the trade educator in New Zealand. The idea that there is a shift of identity that trade educators undergo as they move from tradesperson to trade educator is explored. Whether or not there is opportunity for a successful transition is under question and is discussed in the final chapter.

Entry into the research field of trade education is entry into a swirl: vocational education; apprenticeships; compulsory and post-compulsory schooling; industry training; workplace learning; literacy and numeracy; labour supply and employment; policy demands; economic constraints; social development; neo-liberal educational markets; differing ideologies and educational values. To enter this field of study is to enter a torrent of swirls and undercurrents.

Paul Willis (2000) suggests that entry into a field is entry to the difficulties and dilemmas within it:

A very important consideration for me here is that the preparation for and entry to the field is, unrecognized or not, some kind of intervention into debate, an attempt to grapple with a puzzle ….whose temper and pace leads you to encounter others who bear moving parts of the puzzle (p. 113).

The many parts that make up vocational education and training in New Zealand represent a long history of debate and change. Entry into the field was entry to those difficulties and dilemmas and necessitated an understanding of the background and the wider arena. An attempt to unravel the details of the tertiary vocational education landscape in New Zealand, the ‘players’ and the rules of engagement was part of the my role as researcher and ethnographer. Working in and around this puzzle of moving parts meant that considerable time was spent discerning the parts and determining their place.
As discussed, the debate within which trade teaching and vocational education in New Zealand lies extends beyond the work of the trade tutor or the institutions and workplaces within which trade teaching and learning takes place. Therefore, the study begins with an exploration of the ‘place’ of trade education in the education sector in general and within the vocational education and training sector in particular. This field of education, sometimes barely discernible from Industry Training, has connections to compulsory and post-compulsory schooling and is linked to social and economic development. It is an arena where social, political, educational and economic issues collide and an environment that contains ‘boundaryless’ work (Seddon, 2009), hardly recognisable in New Zealand as an actual and independent field of work or study.

The first chapters of the thesis are designed to make sense of, and organise, the complex puzzle that makes up vocational education in New Zealand. This is followed by an inquiry with trade tutors in polytechnics focussing on the nature of their work as teachers, instructors, trainers, tutors, educators.

In the early months of the study I attempted to map the field of vocational trade education with little success. A fixed and linear representation that accurately mapped the roles and responsibilities within this area of education and training seemed impossible to achieve. This was a puzzle that was difficult to disentangle and organise. However, as the study developed, a model with moveable pieces was constructed, deconstructed and reconstructed with the help of the trade tutors themselves. It became a useful map and research tool and was often a place to begin conversations with tutors as we constructed and shaped it in a number of different ways.

Figure 1 shows vocational trade education at the centre of a collection of tasks, demands, interests and initiatives. This particular model was constructed in partnership with trade tutors in November 2012. The moveable pieces represent the interests of various stakeholder groups who sit at various places within the vocational education puzzle. Not all of them are included. The model represents the work of the trade tutor at the centre of a great number of aspects, initiatives and demands that relate to the multifarious stakeholders and initiatives within their sphere of work. At times the work of the trade tutor involves negotiation between the sometimes conflicting demands of students,
industry, institution, employers and employer groups. This often silent work is part of the unspoken everyday occupational landscape of the trade tutor.

The work of the trade tutor is multifaceted. The term ‘tertiary trade education’ refers to both industry and education. The position of trade tutors in polytechnics is at the junction of trade training and vocational education; their work makes ongoing reference to both industry and institution. This educational work, at an intersection, requires close reference to the needs of industry while also ensuring a level of responsibility for the social educational demands required by policy goals. It is the background to a workforce in a state of constant flux.

The trade teaching/training workforce is connected to the changing needs and requirements of a changing economy. As a result there is lacking an independent identity separate from stakeholder interests and requirements. Opportunities to discuss and mediate the often competing demands of industry and employer, institution and student are rare. However, trade tutors engaged readily in the discussion and modification of a conceptual model as an opportunity to discuss their views.
Trade teaching, for the purposes of this study, is seen as being located historically as well as within an edu-socio-political framework. It is placed in the very broad Vocational and Technical Education and Training field and can also belong to the myriad of post-compulsory education possibilities including: foundation education; bridging education; community education; and can be referred to as technical training, apprentice or pre apprentice training, trade education, workplace training and industry training.

**The heart of the study**

Tertiary trade tutors in New Zealand, and for the purposes of this study, are those that deliver trade-related training and education in a polytechnic environment. Although their work is often positioned by industry as ‘industry focussed’, their role within a teaching institution means they are neither solely industry-based trade practitioners nor industry-focused trainers. Currently their work does not seem to fit neatly into the educational structures of a polytechnic, as will be shown in this study.

Trade tutors undertake training and educational work that is often beyond that of the trade trainer. This work is becoming increasingly crucial to meeting minimal educational achievement targets set by policy and reducing the number of young people identified as NEETs (Not in Employment, Education or Training) as well as a critical part of the Better Public Service Target of increasing the number of 18 year olds with NCEA level 2 or equivalent (State Services Commission, 2014). These targets set by government are to be achieved through Trades Academies, Social Development programmes and programmes associated with the fees free ‘Youth Guarantee’ scheme for 16-19 year olds. Tutors are thus often engaged in the teaching of students disengaged from formal compulsory education. The curriculum and training provided is considered vital to a highly skilled New Zealand trade workforce. This educational work addresses an industry- and government-identified skills gap. While the outcome of their teaching is fundamental to the sustainability of New Zealand, the work itself remains largely invisible. This is work undertaken in the gaps – the skills gap and the edu-social gap – and carried out by an almost silent and invisible workforce.
The purpose of the thesis is to contribute the perspective, views and ideas of tertiary trade tutors to a developing discourse relating to the trade education and vocational education and training (VET) field in New Zealand. Trade tutor perspectives on the complex environment within which they operate will contribute to the development of our understanding within the field and thus enhance opportunities to improve the provision of trade-related VET in the New Zealand context. It is envisaged that such perspectives, gathered from the ‘inside’, will expand understandings in the debate as to the accepted view of the purpose, the people and the place of vocational trade education in New Zealand.

In this way the study draws on Habermas’ idea of communicative action (Habermas, 1999) and is a vehicle for the voice of trade tutors who are often silent in the complex world of trade and trade-related education. It is intended that this work provide an account or testimony of an often-overlooked subgroup of the educational workforce who are detached from industry, separated from schooling and sometimes do not quite fit into the educational structures of the New Zealand polytechnic environment.

**The research focus**

The study conceptualizes vocational trade teaching as a subset of the vocational education and training sector. As an umbrella for trade education, vocational education is considered within the thesis. As such, the question that sits over the study is: What is tertiary level vocational education in New Zealand about?

The question that underpins the trade teaching aspect of this study is: What is trade teaching in New Zealand about? This question focuses on trade tutors as the key participants in the study. Thus, the work of trade tutors in terms of their identity, the placement and positioning of their work and their role is explored. It is from this that I seek to develop an understanding of the best ways to prepare trade tutors for the rigours of teaching a sometimes demanding study body, in a modern polytechnic environment.
The thesis explores how trade tutors identify (and how they are identified), what they do, how they do it and under what constraints. The questions the thesis seeks to answer are: 1) Who are the vocational tertiary trade educators in New Zealand? 2) What is their role? 3) What are their perceptions of their role? and 4) How can they best prepare for and be supported in the role? These questions are asked of trade tutors and about them.

Figure 2 below shows the umbrella question at the top of a series of questions related to and asked of trade tutors and demonstrates an inter-relationship of the questions with trade tutors at the centre.

**Figure 2. The research questions**

**The significance of the research**

Vocational education is in a state of change. As governments seek to develop a skilled and knowledgeable workforce for the knowledge-based society, and industries respond to skills shortages and educational institutions to increased scrutiny for funding, “teaching performance has become an increasing worldwide issue” (Hillier, 2009. p. 7). The vocational education workforce as central responds to industry needs, government demands and institutional pressures. It is here where change is felt on many sides.
Change is reflected in shifting trends and there are some clear examples facing the current VET sector in New Zealand. These trends reflect the increasing pressure on VET globally and are commented on by researchers and theorists from a number of countries. Particular changes commented on are: the culture of the student body (Adams & Gamage, 2008; Bathmaker & Avis, 2007); multicultural diversity (Adams & Gamage, 2008; Marginson, 2004), dramatic technological advances (Hillier, 2009); and the need for responsiveness to the changing market place. Teaching and learning has become progressively scrutinized (Adams & Gamage, 2008) and this is most evident in a sector that sits at the crossing of employment, social development and education.

There has been little research in New Zealand in the area of tertiary trade-related education and training. Trade education is a field rarely examined in educational terms and tertiary vocational education on the whole has received little scholarly attention. This is despite recent increased visibility for trade training in terms of government policy relating to Vocational Pathways, Trade Academies and Youth Guarantee, Maori and Pasifika Trade Training Schemes, the secondary tertiary interface, ‘kickstart’ for apprenticeships, New Zealand Apprenticeships, Better Public Service targets and the concern relating to NEETs.

The recent heightened policy focus on this area of training and education is in contrast to the thirty-year hiatus in trade-related and technical training in New Zealand. The demise of the former apprenticeship system under which most trade tutors learnt their trade, the rise of education and training as a marketable commodity, the lack of vocational or trade-related education in the core curriculum in schooling, the adoption of ‘technology education’ in schools and the end to training in large state-owned enterprises as a result of neo-liberal policies have combined to create a situation where trade-related education and training has become dismantled and left to occur on the fringes of reorganised systems in a relatively haphazard and disorganised way.

There has been a recent heightened awareness of the ‘skills gap’ in New Zealand. This is referred to as a ‘skills crisis’ (NZ Herald [http://www.nzherald.co.nz/skills-crisis/news/headlines.cfm?c_id=1503304p]). Attempts have been under way to encourage
more young people and employers into trade training through the reorganization of the apprenticeship system. However, despite recent attempts to restore trade training, the results of the long neglect have become apparent. This has been highlighted by the call for trade skills following the 2011 Christchurch earthquake and the subsequent ongoing rebuild, where concern about the need for ‘imported’ skills and labour stresses the lack of local, home-grown tradespeople. We seem to know very little about what constitutes successful trade training. Certainly the traditional approach to apprenticeship training has radically changed and the structure of apprenticeships has altered considerably, taking on a number of guises since the 1980s.

Learning in vocational education has traditionally been seen in New Zealand as an ‘alternative’ to academic schooling or education, or a place where young people are directed when they are not sure what to do or have disengaged from regular educational environments. In New Zealand, as in the United Kingdom and critiqued by Allen and Ainley (2013), vocational education has been seen as a suitable space to ‘fix’ literacy and numeracy and the problems of low educational achievement.

Moreover, there continues to be little focus on the big questions about where this kind of education and training fits into the wider New Zealand environment for training, education and work, over which stakeholders ultimately maintain or exert ownership. Further, there is a lack of recognition of the trade tutor workforce or the knowledge and expertise with which they undertake daily work in this field.

Indeed, the imperative to increase the number of skilled tradespeople in New Zealand has done little to promote a rationalisation of the education and training sector. The provision of more openings and increased accessibility in terms of student pathways has not been coupled with attention to the detail of what really happens or ought to happen in the training environment of the sector. A recent internet search (in May 2014) under ‘trade training New Zealand’ produced an array of links including pre-trade training with Careers New Zealand, Accredited Industry and Trade Organisations through NZQA, New Zealand Apprenticeships through the Tertiary Education Commission, Maori and Pasifika Trades Training Initiatives, Certified Builders Association, Trades Academies through the Ministry of Education, a variety of ITPs, and PTEs and ITOs. Some of these
organisations deliver training and some provide information on training. There are Trades in Schools, Pacific Trades Initiative, Maori Trades Training and funding streams within the Foundation of Youth Development and through youth employment packages.

A wide range of training options are provided with multiple pathways but with little attempt to understand the mechanisms for high quality trade training. The question that the trade training sector might be asking is: How do we train highly skilled people for the future in a way that serves both industry and individuals? Instead, the policy question that seems to have been asked is: ‘how do we get the greatest number of tradespeople fast and for the least cost?’ or ‘how do we reduce the number of NEETS or unemployed?’ Trade training has become a solution looking for a question – a way to fill gaps.

The incoherence and convolution of the wider structures for vocational and trade education and the abundance of stakeholders obscures the detail that might provide clues for a robust, high quality trade training sector. There is a lack of clarity around the function of trade training. Attention to this detail; the purpose of the sector, the content of a strong vocational and trade curriculum, models of teaching and learning and the underlying values and cultures has been lacking. Often this is more the result of the difficulty of unravelling a single aspect of the complicated, complex and multi-layered vocational education sector than the reflection of a lack of awareness or interest.

In reality, those most interested in the detail are those at the ‘chalkface’, whose work lives contain the elements relating to trade education and training and trade skills knowledge and quality. Their voices however, are rarely heard. Without an identifiable occupational space within the arena of vocational education, those engaged in the delivery of trade-related education have little opportunity to voice their concerns and ideas.

It is intended that this thesis will enhance understanding and knowledge about trade and vocational education and educators in New Zealand. The purpose of the work is to expose the voices of tutors inside the trade education and training sector and thus contribute to the visibility and recognition of a space and occupation where real work happens, undertaken by a skilled and identifiable workforce.
Structure of the thesis

The thesis is divided into nine chapters as outlined below in the thesis map (Figure 3). The thesis map provides an overview of the organization of the thesis.

Chapter One provides an overview of the field of vocational education in New Zealand and the motivation for the study. My own position as a researcher is presented, and there is an overview of the study in general. This chapter provides a rationale and a context for the study emphasising the complexity of the sector within which vocational trade education sits.

Chapter Two provides a picture of the current ‘players’ in the tertiary trade and vocational education sector in New Zealand. This chapter provides an outline of the current organization of the sector. It explains the roles of the players in the field and exposes the challenges in making sense of this area of education. The chapter marks out some boundaries within the field and identifies the places where boundaries blur and cross. The Governance Grid (Robertson, Bonal, & Dale, 2002) is presented as a tool to conceptualise this complex sector and to organise the puzzle of vocational education in New Zealand. As with other scholarly research in education and social science, this chapter engages in some analysis on the place of trade and vocational education in the
wider political sphere. This chapter provides a ‘landscape’ and is the first of two chapters that present the reader with a background to the sector.

Chapter Three maps out the historical background for trade education in New Zealand. The historical roots have a strong influence on the current identity, form and condition of trade education. This chapter provides a historical context with the idea that the present incorporates the past. In particular, it facilitates a wider perspective and view of the sector of vocational education and the trades education and training sub sector. The chapter considers the development of the different pieces of the puzzle that make up trade and technical education in New Zealand and provides, in part, an explanation for the current complex and convoluted trade education and training situation.

Chapter Four is in two parts and presents a review of the literature in the field of trade and vocational education. The first part of the chapter explores the scope and character of the research undertaken and the literature that considers the practices and nature of vocational education in New Zealand. The second part brings together literature in the field of ‘quality’ teaching and explores notions of quality in vocational and trade education with particular reference to New Zealand and Australia.

Chapter Five presents the theoretical considerations that underlie the study and the methods and tools selected for data collection and data analysis. The TIME method or Theoretical Informed Methodological Ethnography (Willis, 2000; Willis & Trondman, 2002) is outlined as a methodological basis for the study. The approaches used in this study are conceptualized as a series of layers which are peeled back to reveal the work and world of trade tutors and their perceptions of that role. Working through the layers is seen as a way to clear the convolution that obscures the reality of trade and technical education. The processes and the methods used to clear the way and get to the heart of the study are explained.

Chapter Six discusses the particular approach used to work through the layers and engage with the swirl surrounding the study. The focus group was a site for constructing an artefact, or a participant’s representation of their work, as a lever for discussion. This
method is an important way forward for the study. The results of the focus groups are presented along with some analysis of the artefacts developed in the focus group study.

Chapter Seven presents the results of interviews with tertiary trade tutors. The data are grouped into the themes which emerged from the analysis of interviews. This chapter addresses the heart of the study: the perceptions of trade tutors about their everyday work. The goal of the chapter is to make sense of the data and present the findings in an authentic way through the words of the tutors.

Chapter Eight describes visits to workshops and observations taken from a field notebook during the course of the study. The chapter is descriptive of the events that occur within the working world of tertiary trade teachers from different trades.

Chapter Nine draws out the lessons from the study. The chapter concludes the thesis by drawing together the ‘big ideas’. I outline a series of fundamental considerations and make recommendations for ways forward in the area of teaching and learning in trade education in New Zealand.

This is a thesis that sits within educational boundaries. Trade tutor views are seen through an educational lens. Much of the discussion with trade teachers is in the area of teaching and learning. However, it must be acknowledged at the outset that trade tutors themselves see their work as part of a much bigger picture, and identify their role as more complex than a passing on of trade skills and knowledge through courses and programmes in polytechnic environments.

The study can be broadly placed in the field of critical studies in education. It draws largely on a critical ethnographic tradition that seeks to unravel and understand, to represent and illuminate this area of education and the educators within it. This representation of the ‘lived’ worlds of trade educators “is always selective and transformative” (Willis, p. 116) but it provides an opening for ongoing critical discussion in this increasingly visible area of education and training at the mercy of policy makers.
The idea that vocational trade education is important and that trade educator views are worth uncovering provides momentum for the study. I have chosen to explore the idea of tertiary-level trade education and training with the trade tutors as active participants. This account is my account of their account. Trade tutor words are used as much as possible and the story of their work, presented here, holds as closely as possible to their own stories. Their expertise and know-how in terms of their trade and the specific pedagogies of their trade as well as their perceptions of the wider vocational education environment in New Zealand are critical components of the study. Trade tutor perspectives guide the thesis. Their perceptions are crucial to a successful, current and local system for the passing on of trade knowledge and expertise to novices in a way that benefits all stakeholders.

I do not suggest that the picture presented within this thesis is definitive. As with any study it can only be a product of my own sensibility, the forming of my own “puzzles and theories” (Willis, 2000. p. 116). I do hope, however, to present a picture formed with the guidance of trade tutors that in some way exposes and explains the current environment. I also hope that increased clarity about the complexity of vocational trade education and training in a New Zealand vocational education and training context will support a case for the recognition of educators and educator identity as vital to the vigour of a dynamic, skilled future.
Chapter 2. Background

Vocational education – the wider context for the study

The study examines both public and private worlds, the domain of vocational education and the notion of vocational and trade education and training from the perspective of trade tutors. In this way, the study is situated within tertiary vocational education generally and trade-related teaching within a polytechnic pre-trade and trade environment specifically. As previously stated, this area borders the compulsory and post-school education sectors but is also influenced by trade and industry training, employers, work and labour markets.

Conceptualising a complicated and constantly changing sector is difficult. The shape, role and goals of vocational education and training in New Zealand are influenced by global, national and local conditions and have developed within a very specific historical, political, social, cultural and economic context. The role and control of the state and the incumbent tensions are important factors in any educational environment and particularly one that intersects many interests. As a direct result, the work of educators is complex and contested (Jesson, 2008) when it is theorised as part of this context.

This sector of education sits more closely than any other at a nexus of state, market, community and household and because of this has been affected by the neo-liberal retreat of the state beginning in the 1980s and following the Picot Report of 1988, which decentralised much educational administration in schools and had a “major impact on all that followed” (Mutch, 2001, p. 76).

Twenty-first century tertiary vocational education in New Zealand is shaped by global factors of changing labour markets, shifting workplaces and economies and changing values around work, knowledge and skills. The complexity of this system is illustrated (see Figure 4) in the Pluriscalar Governance of Education grid (Robertson et al., 2002). More than any other education sector in New Zealand, vocational education is responsive to the needs and changes of state, market, community and household. The ‘institutions of co-ordination’ are in constant flux as their significance advances and retreats at different
periods based on changing social and economic conditions. Occasionally they work together and, at times, they are in competition.

Figure 4. The ‘Pluriscalar Governance of Education’

Source: Robertson, Bonal, & Dale, 2002, p.478

This Figure provides a valuable framework for considering tertiary vocational education in New Zealand. The ‘Governance Grid’ is particularly useful for viewing and understanding the conflicts and tensions within vocational and trade education in New Zealand and how these have changed over time.

The value of the grid for this study is that it represents the complexities and pressures within systems of education. Balancing and managing the often competing tensions, demands and goals at each level of co-ordination to address national and economic imperatives as well as the goals and needs of the community and individuals is an ongoing problem for education. This is particularly challenging for tertiary, state-funded, ‘industry-led’ vocational education in New Zealand, which sits at the junction of work, education, industry and social development. The scale highlights the idea that “factions
that are active participants at one scale can fade from the scene or even change at another” (Robertson, et al, 2002, p. 476). Such change is relevant for the ever-changing world of tertiary vocational education and are highlighted in Chapter Four.

As a framework, the grid conceptualises local systems of education as acting on, and influenced by, national and global forces as part of a larger system. In the global environment, further and vocational education in New Zealand is part of a competitive national and international education market. Issues of standards, curriculum, qualifications and delivery are influenced by global as well as national factors and the international education market places pressures on the New Zealand educational market which, in turn, affects national and sub-national goals and expectations.

The increased ‘privatisation’ of education has continued and the governance activities of institutions, once largely the domains of the state, are now contestable, complex and moveable. Education has become a marketable commodity. The state, having continued to withdraw its influence from the vocational and trade education sector, has largely left the environment to ‘market forces’ (Strathdee, 2003). Ownership of trade qualification standards has been with ‘industry’ and training is undertaken by a continuing wide array of providers who have entered the training market. This has had a destabilizing effect on vocational and trade education. The role of the state has retreated to largely one of regulation where it seeks to regulate and manage educational quality as well as provide a place for education within social demands and as part of a national strategy.

As Chapter Four will show, during the 1980s much trade-related education and training in New Zealand disappeared along with the state-owned enterprises that provided the training (Abbott & Doucouliagos, 2004). Training was bound up with the state through enterprises such as the Ministry of Works, the Electricity Department, the Forest Service, Railways, and the Post Office, where the training of apprentices to be technicians, carpenters, engineers, plumbers, mechanics and electricians took place. Trade training and cadetships in a broad range of industries effectively ceased training when big state enterprises were broken up and sold off. New Zealand now finds itself in a much discussed and, as expressed by media, ‘skills crisis’ (NZ Herald
Employers, while keen to employ a skilled and trained workforce, have historically shown reluctance to contribute to training. There is still wide variation in the support employers are prepared to give to employees who engage in training and skill development. Many expect that a young graduate will arrive completely ready to undertake the demands of work as a fully experienced worker.

New Zealand is part of a global employment market. While it may make economic sense to import a skilled workforce rather than train one, there is more than economics at stake in the employment of locally trained people. In addition to a skilled and trained workforce for industry, education and training within the Vocational Education System contributes to national identity, is included in social policy and plays a critical part in goals for equity and social development (Robertson et al., 2002, p. 494).

**Tertiary education**

While it may seem pedantic, it is important to clarify some key terms and to outline exactly what is being referred to by the terms ‘vocational’, ‘trade’, ‘trade teacher/tutor/educator’ and ‘trade education’. The word ‘student’ also needs some brief introduction. This is to avoid the confusion often suffered in this environment where there is a confluence of terms connected to trade-related education.

In general, the term ‘technical and vocational education’ in New Zealand refers to the type of education that is identified as non-academic. Traditionally this term is used to refer to practical-based subjects or pathways alternative to academic within secondary schools and can lead on to tertiary level training (Ministry of Education, 2015). ‘Vocational education’ can be used to refer to any training that leads to a particular occupation including medical training, the law, accounting and any type of education that prepares trainees for a career. However, in New Zealand the term ‘vocational education’ generally refers to training and education that is linked to a polytechnic, a trade or
subjects deemed non-academic and is generally recognised as something that is the

In the United Kingdom, vocational education is associated with Further Education, and
distinct from Higher Education that is undertaken in a university. In Australia VET
(Vocational Education and Training) tends to be undertaken in TAFE (Trade and Further
Education) colleges. In New Zealand vocational education typically means skills and
work-related education and training that is identified as ‘non-academic’ and which
occurs in workplaces, or tertiary education environments including polytechnics,
wānanga and private training establishments (Ministry of Education, 2015).

Tertiary education in New Zealand refers to any post-school educational programme and
is sometimes known as post-compulsory education and training (PCET). Traditionally it
has been seen as the third tier of education following secondary schooling and according
to the most recent Tertiary Education Strategy (2014-2017) “…It includes higher
education, applied and vocational training, and training in foundation skills where these
have not been obtained during schooling. It includes structured learning in a range of
settings, including workplaces, universities, and polytechnics.” (Ministry of Education
[MoE], 2014, p. 3).

However, some educational boundaries have become fairly arbitrary. Increasingly,
polytechnic education is linked to secondary schooling through the applicability of unit
standards to national schooling qualifications and through ‘vocational pathways’.
Changes in the Education Act to provide for dual enrolment between secondary and
tertiary organisations along with the development of Trades Academies as partnerships
between schools and polytechnics have also created links between the secondary and
tertiary sectors. Similarly, polytechnics are often called upon to provide foundation-based
training and community-based education through the Ministry of Social Development.

Polytechnics and universities have traditionally been differentiated by their respective
histories, status, levels of autonomy and the level and type of education and training
provided. Government has also provided policy-based strategic directions for each in the
three-yearly Tertiary Education Strategy. However, an historical division relating to the qualification levels at which each function has become blurred more recently.

Polytechnics in New Zealand can deliver post-school, foundational education at levels 1-3, the same level of education as the compulsory schooling sector. They can also offer diploma-level programmes and degrees. While universities offer degree-level courses, they do not engage in the delivery of programmes below level 4 on the New Zealand Qualification Framework.

In New Zealand policy documents are beginning to use the term VET (Vocational Education and Training). The most recent Tertiary Education Strategy (2014-2017) identifies this sector for the first time using the term Vocational Education and Training Sector. While this is an emerging identifier in New Zealand in its current name and definition, VET takes place in workplaces, polytechnics and PTEs (Private Training Establishments) and has taken place in many guises over generations.

Traditionally, the term TVET (Technical and Vocational Education and Training) was also used. This is changing since what was once known as technical education in schools and polytechnics has become an imprecise term. The changing of the technical curriculum in schools, once largely woodwork and metalwork, to a ‘technology’ curriculum has differentiated technology and trade. The technology curriculum has become design based rather than tool based, and relies on concept planning and design rather than practical or ‘hand’ skills.

Organisations in New Zealand including Industry Training Organisations and Institutes of Technology and Polytechnics as well as employers currently use the term ‘trade training’ to refer to a variety of training opportunities and environments including ‘on job’ as well as polytechnic trade education and training, pre-trade certificate levels 1 and 2 training and education and training at national certificate level. Introduction to Trade courses are also part of the Trade Academy partnerships provided through secondary school ‘consortia’ and trade training can be funded through the Ministry of Social Development to beneficiaries as courses that are deemed preparation for work.
The use of the term ‘trade’ in this thesis refers to a conventional trade, traditionally a male domain and which involves tools and implements, and where training has customarily used a time-served component along with certification to become qualified. Trade education is education or training that leads to formal certification through a trade certificate or national certificate. For example, it is the training that a trained and certified carpenter, plumber, fabricator, registered electrician or similar would undergo to gain their qualifications. In New Zealand to become a qualified tradesperson a candidate would usually have passed a level 4 qualification in the trade. In general trade related programmes at level 1-3, while still in the trade discipline are known as foundation qualifications or introduction qualifications and are often referred to as pre-trade courses. Secondary schooling qualifications in New Zealand are at level 1-3. Most tutors will work across all levels.

In Australia the majority of flagship trade qualifications are at level 3 on the AQF (Australian Qualifications Framework), however the secondary schooling certification is at sub level 1 on their framework and level 1 and 2 qualifications are known as pathway qualifications (New Zealand Qualifications Authority and AQA, nd).

New Zealand and Australia have a mutual agreement to recognise trade and vocational qualifications and New Zealand is part of the Lisbon Qualification Recognition Convention which means New Zealand qualifications are more easily recognised in each of 50 Lisbon convention countries including UK, France, Germany, USA, Canada and Australia (Ministry of Education, 2015)

**Trade education, tutors, trainers, educators**

As for the use of the term, ‘tutor or teacher’, this was much discussed throughout this investigation. Some trade tutors intensely disliked the term ‘teacher’ while others accepted it. Most preferred the idea of being called a tutor, which more accurately described their own perspectives of their work as being closer to their students than the distance suggested by the word ‘teacher ‘or ‘lecturer’. The policy context situates them as ‘teacher” (MoE, 2007, p. 24) and that is the only term used to describe their role in the Tertiary Education Strategy, but as it relates to trade and industry based training, is not
used widely by tutors, nor is it used with confidence. The ‘teacher’ term is explored in interviews and described further in Chapter 7.

Unlike university lecturers or secondary school teachers, tutors who teach in polytechnics are not required to have degrees but are required to have experience, skills and certification in their particular discipline. They are also not required to have teaching certification or training.

Interestingly, Wheelahan and Curtin (2010) in their report on VET in Australia, use the word ‘teacher’ as an inclusive label to encompass all those involved in teaching in VET (Vocational Education and Training). They explain that their use of this term encompasses any person engaged in the work of teaching in a vocational setting. I acknowledge that this term causes some discomfort for trade tutors in polytechnics, and so I use it carefully. Very often, for the purposes of this thesis, I use the words ‘tutor’ and ‘teacher’ interchangeably, aware of the subtle differences relevant to trade tutors. Both terms refer to those involved in the human and often imprecise work of teaching in the vocational sector and covers all the myriad aspects of the work.

When referring to teaching in the wider Vocational Education sector, I use the term ‘educator’ to describe the wider group of practitioners involved in this sector of education. I do not suggest that this use of terminology is necessarily correct. It does however, provide some necessary explanation for my use of the words ‘tutor’, ‘teacher’ and ‘educator’ throughout the thesis. It also highlights the problems associated with occupational identity and occupational space that this thesis explores. I start below with a brief exploration of the confines of the role.

In their tutoring or teaching positions, those engaged in trade-related teaching or instruction are formally referred to as: tutor, lecturer, teacher, instructor and trainer. In New Zealand those involved in industry training through a workplace tend to be nominated ‘instructor’ or ‘trainer’, as distinct from ‘assessor’, who, while connected to trade education and training operate somewhat outside of teaching or tutoring. Those within Institutes of Technology and Polytechnics tend to be identified as either ‘tutors’ or
‘lecturers’. Some are referred to as facilitators. This can depend on where they sit on the salary scale.

While some of the practical components of trade training take place outside of Institutes of Technology and Polytechnics (ITPs) in workplaces where units of learning are managed by employers, verifiers or assessors it must be noted that this is relatively unregulated. Employers do not require any qualification or licensing to ‘sign off’ on-job components of unit standards, and workplace assessors offer brief site visits, deliver workbooks and assess on-job components of unit standards. The fact is that ‘employers’, ‘verifiers’ or ‘assessors’ are not trade teachers or trade tutors.

Similarly, those involved as ‘students’ within this environment are referred to as ‘trainees’ by industry, ‘students’ within a polytechnic, and ‘learners’ in adult education circles. It is suggested that learners involved in tertiary level vocational education and training are both trainees and students.

For the purposes of this thesis, then, a ‘trade teacher’ or ‘tutor’ is someone who is formally employed in the role of trade teaching, and is understood as one who is themselves certificated to an advanced level within their trade, has worked within that trade or a related trade and teaches that trade or an aligned trade.

While it is difficult to assign an exact description to the title ‘trade tutor/teacher’ or to clearly identify the role, it is important at this early stage to at least make an attempt to be clear about who is being referred to, and what we mean when we refer to them. Indeed, the questions around who trade teachers are, and the kind of work they engage in, is a central subject within the thesis.

**The landscape and the actors**

I begin this section by briefly outlining the landscape within which trade education and training in New Zealand occurs. The section provides an outline of ‘actors’ within the landscape and their respective roles, relationships and responsibilities and is necessary to
understand the bigger picture (Seddon et al., 2013) of trade-related training and education.

The wide range of government agencies that have some connection with tertiary education are named on the Tertiary Education Commission (TEC) website (http://www.tec.govt.nz/Tertiary-Sector/). The agencies include the TEC itself as the agency that advises on tertiary education policy, the Ministry of Education which leads the development of the Tertiary Education Strategy and advises on the Government’s budget, Careers New Zealand which link students with study or employment options, the New Zealand Qualifications Authority (NZQA) which administers the New Zealand Qualifications Framework (NZQF) and registers Tertiary Education Organisations (TEOs), the Ministry of Social Development which funds employment training, the Ministry of Business, Innovation and Employment which provides labour market information, and StudyLink.

Tertiary Education Organisations (TEOs), include Industry Training Organisations (ITOs), who set qualifications and develop unit standards for the associated discipline or industry and Institutes of Technology and Polytechnics (ITPs), Private Training Establishments (PTEs), Universities, Wānanga and others including community organisations all of whom are identified as ‘providers’. Institutes of Technology and Polytechnics (ITPs) as the organisations, within which this study is contained, operate as state-owned Crown Entities governed by a Council and managed by a CEO; ITPs as such are required to follow quality assurance process governed by NZQA and undergo regular external evaluation and review.

The qualifications environment consists of ITOs, ITPs and PTEs. While ITOs are involved in the writing of standards, NZQA are charged with the setting of standards, and providers (ITPs, PTEs and ITOs themselves) are charged with delivering them. Quality assurance processes feature heavily in each of these environments and all bodies have a set of underlying forces – economic, social and political.

The education reforms which opened the sector up in the mid-1980s, resulted in the growth of providers and organisations so that, by 2010, Industry Training Organizations
(ITOs) numbered 39, there were 20 Institutes of Technology and Polytechnics (ITPs) and more than 450 Private Training Establishments (PTEs). Qualifications also grew to number approximately 990 national certificates and diplomas, and in excess of 17,000 unit standards nationwide. All of these sat within one of 17 fields and approximately 129 subfields.

Shrinkage based on government demands for a leaner and more value-for-money system has reduced the number of ITOs to 12 in 2015 with some review of their tasks and responsibilities. There has, however, been little rationalisation of the requirements for an ITO to demonstrate its ability to lead in the area of qualifications for vocational education and training.

The recent and ongoing TRoQ (Targeted Review of Qualifications) that commenced in 2008 through NZQA, focuses on qualifications structures in vocational education and has reduced the proliferation of qualifications that developed from the 1980s. This process of review brings together standard-setting agencies, deliverers of training, professional bodies and other stakeholders to review standards and content. While still in progress, it is suggested that the process will ensure there are a fraction of the 990 qualifications left by the end of 2015.

Trade-related education and training has also been included in the planning of the welfare system. The Welfare Working Group in its “Reducing Long-Term Benefit Dependency Recommendations” (2011) proposed apprenticeships, trade training (p. 94) and trade academies (p. 151) as mechanisms to address youth unemployment and reduce disengagement from traditional schooling and the resulting NEETS.

Vocational and trade education in this guise is seen as a location for the re-direction of the young and unemployed to develop a workforce which meets an economic demand. This echoes developments observed in the United Kingdom where Allen and Ainley (2013) identify the function of education for the state as one of social control and labour market supply and less as opportunity for change or the reforming of society (p. 90).
While these demands might suggest a flexible and nimble system, which provides opportunities to adapt to ongoing changes, the opposite is true. A trade course or programme within a polytechnic undergoes a series of internal processes for development and approval before being dispatched to NZQA for external approval. The standards which are contained within the qualification are developed by ITOs. Approval can take some months. Specific approval processes are governed by a number of agencies and bodies. The development of a programme of learning must report on delivery methods, assessment, principles of learning and teaching, outcomes, design issues relating to how the programme is put together along with the mechanisms for assessment, moderation, monitoring and ongoing compliance. Changes to approved programmes can require starting the process again from the beginning.

Moreover, education and training in general for 16–19 year olds has changed shape. The most significant recent change to the New Zealand education system with strong implications for polytechnics and vocational educators is the shift in the ‘secondary–tertiary’ interface. Changes to the Education Act (2010) provided for dual enrolment in secondary school and tertiary organisations and has shifted the focus of trade-related education from the tertiary ITP environment. This change reflects a recognition that the secondary schooling system, with its university-focussed curriculum does not suit all students and many leave school without qualifications. This has opened the door to different ways of providing trade-related education and training where programmes can be offered in a variety of forms and delivered in either the secondary or tertiary environment. Schools and polytechnics or PTEs are increasingly entering partnerships in trade academies and schools operate in clusters to share the co-ordination.

The 2010 change in legislation altered the education landscape considerably and in ways yet to be realised. The development of trade academies and partnerships between schools and polytechnics requires that previously siloed and at times competing sectors co-operate. While polytechnics and schools consider their respective positions, educators at the ‘chalkface’ grapple with the implications for their traditional role, practice and beliefs around teaching and learning a trade.
In the current tertiary qualifications environment, institutions are compelled to respond to ongoing and often changing mechanisms for funding, monitoring and evaluation. Tertiary institutions are obliged to take into account the needs of industry, and of students, and to engage with regional and community needs through local strategies. As tertiary institutions respond to educational reforms and the various stakeholder concerns, tertiary teachers are involved in a state of ongoing compromise as they seek to negotiate the contexts in which they teach – qualifications, institution and student body.

As the precursor to Industry Training, apprenticeships in New Zealand have shifted dramatically and this is demonstrated by historical and ongoing legislative changes outlined more fully in Chapter Three. This continually changing landscape has expanded and contracted relative to social and economic pressures and demands. Over time, such changes have heralded shifts in responsibilities and there has been a marked gradual increase in the number of stakeholders to a more complex landscape between compulsory schooling and work (Middleton, 2011).

**The Tertiary Education Strategy**

The Ministry of Business, Innovation and Employment and the Ministry of Education combined to author the most recent Tertiary Education Strategy. This is a clear signal that vocational education and trade education and training sits on the boundary of economic demands and social pressures and thus between governance activities (Robertson et al., 2002) where the institutions of co-ordination become increasingly muddled.

Since beginning this research in 2010 there have been three Tertiary Education Strategies in use: Tertiary Education Strategy 2007-2012, (Ministry of Education, 2007), Tertiary Education Strategy 2010-2015 (Ministry of Education, 2009) and the most recent, Tertiary Education Strategy 2014-2019 (Ministry of Education, 2014). While earlier strategies have clearly identified the different institutions in the Tertiary Education Sector as Universities, Institutes of Technology, PTEs, Wānanga and have outlined expectations for their specific roles within the sector, the most recent strategy is somewhat different.
This Tertiary Education Strategy (2014-2019) is the shortest of the three Strategies since 2007. It identifies vocational education as distinct from ‘higher’ education, ‘foundation’ education and ‘community’ education. Vocational education is where “individuals gain the skills needed by industry” (MoE, 2014, p. 22). In this strategy there is a tendency to align vocational with ‘training’ which is distinct from ‘education’ (p. 2) that is presumably undertaken in universities, although vocational ‘education’ is identified when specified alongside the divisions of education as ‘higher’, ‘foundation’ and ‘community’. However, the division between education and training exposes some of the weaknesses apparent in the system. This idea is developed more fully in the final chapter.

This latest Tertiary Education Strategy features numerous references to the economy. The strategy states that government requires a value for money system that is part of the ‘wider New Zealand economy’ (MoE, 2014, p. 4) as well as part of the ‘global economy’ (pp. 2, 6). The strategy also outlines that research should be linked to industry as a means of creating an innovative and productive economy (p. 16). Here TEOs are “required to recognise and respond to the demands of a growing economy” (p. 23) in their training, education and research activities. There is no doubt that the emphasis for tertiary education in this strategy is as an economic commodity to meet economic goals.

Despite the emphasis on trade training in ongoing policy documents, the Tertiary Education Strategy mentions the term ‘trade’ specifically only once, under the section relating to Maori and Pasifika and ‘trade initiatives’. Presumably much of the work undertaken in the area of trade sits under the broader categories of community, foundation or vocational.

There are six strategic priorities outlined in the Tertiary Education Strategy. Priority 1 is “Delivering skills for industry” (MoE, 2014, p. 9), and is based on a graph showing ‘Ease of Finding Skilled Labour’ published by the New Zealand Institute of Economic Research; Priority 2 is “Getting at-risk young people into a career” (p. 11) and discusses the Government’s Better Public Services targets of 85% of 18-year-olds achieving NCEA level 2 or equivalent. Priority 3 is “Boosting achievement of Maori and Pasifika” (p. 12) and discusses “equity plans to promote achievement of particular groups such as
learners from low socio-economic backgrounds, people with disabilities, and refugee and migrant learners” (p. 12). Priority 4, “Improving adult literacy and numeracy” (p. 15) has been identified since 2007 as a priority for improvement and continues to be identified as a strategic priority particularly at foundation education level. It is suggested that the improvement of language, literacy and numeracy will occur when industry and education work together ‘to support the up-skilling of the existing labour force’ (MoE, 2014, p. 15).

Priority 5 relates to strengthening research-based institutions where polytechnics are identified as providing “more applied research”, and priority 6 is “Growing international linkages”, which specifically relates to growing the “economic contribution” of international education as the “fifth largest export industry for New Zealand” (p. 18).

This strategy outlines that all “TEOs have a role in delivering on this strategy … informed by the expected characteristics of institutions as identified in section 162 of the Education Act 1989 and the needs of the communities they serve” (MoE, 2014, p. 23).

Under the Act, polytechnics are characterised as “a wide diversity of continuing education, including vocational training, that contributes to the maintenance, advancement, and dissemination of knowledge and expertise and promotes community learning, and by research, particularly applied and technological research, that aids development” (Education Act, 1989, section 162).

All six priorities outlined in the strategy are specifically relevant to ITPs. The wide diversity outlined in the Education Act (1989) in this case suggests education that serves industry, at-risk youth, Maori and Pasifika and low socio-economic or other disadvantaged groups, literacy and numeracy goals, research and international education growth. Universities, exempt from the level 1-3 environment, are not party to priorities 1 and 4.

As demonstrated by the Tertiary Education Strategy, providers of vocational education and training are situated within a myriad of strategy and policy initiatives. In providing education and training, it is their role to respond to, and work with, a large number of actors who have input into the organization of qualifications and content.
Industry and Industry Training Organisations

In the recent Tertiary Education Strategy, ‘industry’ is referred to 30 times. For a 24-page document (with a number of illustrations and white space) this means the word appears very frequently. However, just what ‘industry’ means is not entirely clear.

When referring to industry, the strategy tends to be making reference to Industry Training Organisations (ITOs). Set up following the Industry Training Act of 1992, which reorganized and replaced workplace-based training through apprenticeships, ITOs are required to represent industry, “set national standards and qualifications, purchase off-job training …. and arrange assessment for trainees” (Ministry of Education, 2010, p.10). They act as standard-setting bodies (SSBs) for industry-related unit standards and are responsible for the management of qualification, standard setting, unit standard development, the assessing and moderation of those standards and for the accreditation of institutions to deliver the standards.

When set up in 1992 under the Industry Training Act later known as the Industry Training and Apprenticeships Act (1992) Industry was defined “rather loosely” (Kappert, 1997, p. 131). Indeed, the Act interprets industry as “2 or more enterprises that use a) similar inputs and methods of production to produce similar products; or b) similar methods to provide similar services” (Parliamentary Counsel Office, 2015).

The role of ITOs as Standard Setting Boards as well as providers of industry-based training requires that they have oversight of quality, assessment, moderation, curriculum and standards. This can cause tensions between industry, employers and training and education providers as there is not always a consensus of views regarding such activities. These difficulties however are not new (as will be shown in the next chapter).

The idea of industry as a complete and organized collection of representatives is relatively new. Traditionally, industry has tended to work as self-promoting environments interested primarily in the promotion and benefits as relevant to their businesses. Even in 1958 industry was described as a loose aggregation of units (Kappert, 1997). At its widest orientation, industry will make reference to their own particular area including that which relates to their own trainees, apprentices and their
own businesses. In terms of education and wider teaching and learning matters they tend to have little experience or knowledge.

The role of ITOs in managing qualifications at levels 1 to level 5 and assess provider accreditation has been a large task. ITOs have had continued difficulty relating to providers and tensions between ITOs and ITPs have resulted in much confusion in the area. In some cases ITOs have been accredited providers and have actively delivered workplace assessment at all levels.

However, relationships with ITOs are very important in the work of the trade educator. ITPs as providers of industry-based unit standards are engaged in a number of processes which ITOs oversee. At times conflicts emerge throughout these processes, most especially in terms of the ongoing aspect of what constitutes quality and good teaching and learning, what should be assessed, when, how and by whom.

**Teaching and learning and trade training**

The development of unit standards represents industry needs and attitudes. It is ameliorated by the skills and knowledge of the tutors and by the environment within which they teach. The intentions of the standards are the intentions of industry, structured by NZQA and further by the quality assurance system with an ITP. ITPs are concerned with meeting the needs of industry, NZQA, and the students for which they provide. They are also responsible for developing quality skill development that matches industry and employers.

Educators in ITPs and particularly trade tutors who are engaged at levels 1-3 are often engaged with the task of providing for students who have been unsuccessful in compulsory education. Students may be disengaged from formal education or without the requisite literacy and numeracy skills. Teaching in this environment is a highly skilled task. Often a National Trade Certificate and a unit standard in assessment is all that is required for tutors to engage in educational activities and is little preparation for the rigours of teaching in this environment and at this level.
Many polytechnic vocationally based teachers move into teaching roles directly from industry. Often their introduction to the teaching role takes place while they are embedded in the work of teaching. Recruited on the basis of their industry knowledge and qualifications, they are usually strong industry practitioners. However, many have limited knowledge relating to theories of learning (Leach, 2011) and strategies for teaching and can be pedagogically ill equipped (Viskovich, 2006) to embark on the demands of teaching in a complicated and convoluted educational environment.

Teaching within vocational and in foundation level or pre-trade education is different from teaching within the compulsory sector and unlike that at higher level (level 4+). A lack of compulsory teaching qualifications separates this sector from compulsory education and a general low engagement with research separates it from university-level teaching. Within the sector there is a lack of ‘homogeneity’ in terms of the work, the conditions, the qualifications and backgrounds of teachers and compared to other teaching roles there is an overall undervaluing of the sector (Gleeson, 2005).

There is no legislative requirement for tertiary teachers in New Zealand to undergo teacher training or education before they begin their work as educators. Within the levels 1-3 tertiary educational environment some SSBs outline minimal requirements for individual unit standards, most notably in assessment, or the National Certificate in Adult Literacy (NCAL) at level 4 or 5 or for a Certificate in Tertiary Teaching. Qualifications do exist at higher levels for tertiary educators but there are no minimum standards for teaching qualifications in this sector.

In addition there are often few opportunities in the everyday working life of educators in ITPs to ‘take stock’ of their role as an educator within their discipline. Trade tutors in a polytechnic have few opportunities to develop a theory of learning that meets their own, often un-espoused, views of how learning happens. Much professional development that is provided requires that they alter their notions of learning rather than develop them. This idea is explored more fully in the following chapters, and trade teachers’ views on teacher education for VET trade teachers are explored in the final chapter.
Usually the everyday working environment physically resembles the industry or professional environment from which they have come, including workshops and construction sites. In many cases the occupational cultures of the discipline have been directly transferred into the polytechnic or training environment. There can be few external clues and cues to support an emergent identity as educator.

Yet it is recognized that teaching in this area of education requires a mix of complex skills. Robertson (2009) suggests that high-quality learning opportunities for students in vocationally based programmes require that educators have a range of skills and knowledge in a range of areas.

The work of the trade teacher is very under-theorised. I have drawn on the 1938 work of John Dewey and his vision of education as “pure and simple” (Dewey, 1938, p. 252) and grounded in experience. Dewey suggested that experience was the key to ‘new’ education and that the role of the teacher was to select meaningful experiences and put these before the learner. These experiences are those that are designed to support the education of students in a particular discipline in the present and into the future. Dewey discussed the idea of education as growing or developing physically, intellectually and morally (p. 38).

The development of the trade teaching role from an experiential perspective finds little support in the current VET teacher training or professional learning structures in New Zealand. Overall, the emphasis on developing blended, online and eLearning ‘packages’ overlooks the value in trade education placed on the physicality of the skills and the guidance by skilled practitioners.

In 1939 Dewey called for a philosophy of experience to anchor the theory of experience in education. The work and perspectives of trade teachers in this thesis contribute to Dewey’s view outlined further in the final chapter.

**The reform environment**

Policy relating to trade education, the positioning of trade education, the production of content and curriculum and educator pedagogy and practice reside within a constantly
changing landscape. Educational reforms to the tertiary sector in New Zealand are frequent.

The immediate reform by the new National government in 2009 of the Tertiary Education Commission, the centralized body for tertiary education, as one of the new government’s first undertakings in office, demonstrates the susceptibility to change and reform. Tertiary vocational education is central to government ideology and its shape is vital to economic and social outcomes. Ongoing and frequent changes to apprenticeships, compliance requirements, funding mechanisms and policy that impacts directly on the work of the educator have followed the initial high-level changes of 2009.

Indeed, a survey of the history of this area of tertiary education in New Zealand suggests that the only constant is ongoing change. The sector is described as one undergoing significant and frequent policy change through ‘radical reform agendas’ (McLaughlin, 2003). New Zealand is portrayed as one of the most ambitious in terms of tertiary education reform in the OECD (McLaughlin, 2003).

Reforms starting in the late 1980s significantly transformed the tertiary education sector in New Zealand. Beginning with the Hawke Report of 1988 that aimed at increasing participation in tertiary education, changes through the 1990s moved tertiary education into an increasingly competitive and market-based environment where ITOs, ITPs and PTEs competed for market share.

**Educators and reform**

As trade tutors navigate the continually changing policy and priorities that shape the external world of their work they are also shaped and defined by institutional forces. There is little understanding of how trade teachers in ITPs negotiate and manage the forces within which they work especially in terms of balancing both institutional and industry requirements to meet the needs of their students and other stakeholders. While these forces are not always opposing, a lack of central cohesion and coordination complicates the role. There is little understanding of how trade educators teach, the
pedagogical perspectives that shape their work and how they might best be supported within an educational organization.

Those who deliver the curriculum in an ITP represent both industry and institution. Contained as they are within their trade, trade tutors within an ITP are also identified as tutors within the institutions in which they work. It is their role to deliver the curriculum set by industry within an environment developed by the institution. It is a responsibility to ensure outcomes for both industry and the institution. Their role sits within an industry framework and an institutional framework, at once teachers or tutors within industry and teaching practitioners. With little control over standards and qualifications prepared by industry for delivery within an educational environment, their role can be fraught.

The high number of stakeholders and interests, ongoing reforms, foundering educational identities and sectoral blurring provide the backdrop for an image of a workforce under pressure and with little opportunity to act independently in the cause of trade standards. The so-called ‘dual roles’ (see Beaty, 1998) of trade tutors provide advantages and disadvantages - a tension through which they negotiate their shifting work boundaries and environments simultaneously as industry, institutional and educational agents.
Chapter 3. Historical background

This chapter is presented in three sections. These sections provide a background to apprenticeships, secondary schooling and technical institutes which collectively provide the setting for trade and technical education in New Zealand. Each section follows a chronology of development for that particular area. Thus, this chapter is arranged thematically and chronologically. As an appendix (Appendix G) I have provided a timeline that brings together the key events from each of the three sections which have had an impact on trade and technical education and educators.

The shape of vocational education reflects the social, economic, political and social environment in which it is embedded. There are strong links to New Zealand’s social and economic history. As the expectations for education in the vocational arena have changed, so too, has the shape and structure of training arrangements. The background to vocational, trade and technical education in New Zealand is woven through with other New Zealand histories: the New Zealand labour movement, industrial relations, trade unions, immigration and education.

This is a story of three different interests, the employers, the workers and the educators, as they are played out over time. Together with the state and legislation they form a complex series of tributaries with the interests of each being caught in a continually changing flow of economic–legislative streams. The story provides an understanding of the learning and cultural experience of many of the current trade educators who form the participants in this investigation.

Legislative shifts which have responded to altering economic and technological conditions, and the resulting labour market variations have impacted on vocational trade and technical education and training in New Zealand for more than a hundred years. As these conditions have fluctuated, employer-based requirements for a reliable, ready-made and inexpensive workforce that requires minimal employer input, and the counter-requirement for a highly skilled and well trained workforce with transferable skills who command a competitive salary, have been contested and contestable in an ongoing way. Successive legislation has attempted to balance the competing demands between
employers and workers while seeking to manage vocational and trade education for a skilled economy.

As an example of this contestability in the area of trade training and education a cartoon from The Observer, New Zealand (1894) is pictured below (Figure 5). The cartoon entitled “What we may expect to happen when the Masters and Apprentices Bill becomes Law” shows a ‘disheartened’ employer being threatened with court for a variety of offences including not sending apprentices to church or neglecting to teach an apprentice the trade adequately. The cartoon plays on the fear of employers that apprentices will have an advantage over them in terms of financial gain, holidays, recreational activities and the ability to seek court action should the employer not co-operate with apprentice demands. An employer is pictured fleeing ‘the responsibilities cast upon him by the Apprentices Act’ and another is seen in ‘gaol’ for the ‘crime’ of not adequately teaching an apprentice his trade. An image of an overwrought employer holding a copy of the Master and Apprentices Act in one hand and a gun in the other states “the employer has the choice of two evils” with the words of the overwrought employer: “Seems to me I either have to go to gaol or blow my bloomin’ brains out.” One image shows a ‘Model master and model apprentices’ as ‘a comedy in seven Acts’ suggesting that the Act is a joke.

This Act was never passed, staying at the Bill stage possibly as a result of an ongoing campaign by employers against it as outlined below. The 1894 cartoon, as a legacy of the Bill illustrates the tensions and difficulties associated with legislative changes over employment and the philosophical clash between the upskilling of workers and business interests.
Figure 5. An example of tensions from New Zealand Observer, 1894
This chapter considers some of the key legislative attempts to direct and manage vocationally based training and education to suit changing economic, social and political environments. Apprenticeships are tracked from the first legislative requirements to the formalizing of trade and technical education and training to Industry Training and to a modern Apprenticeship and VET system.

Included in the chapter are the development of technical education and technical institutes and the development of national qualifications as directly related to trade and vocational education.

**Section 1. Apprenticeships. A balancing act**

The history of apprenticeships in New Zealand has been documented in *A History of Apprenticeship in New Zealand* (Murray, 2001). This Master’s thesis records the key issues and concerns relating to the development of the apprenticeship system in New Zealand. I do not intend to repeat this work; however, a tracking of key legislative changes to the apprenticeship system provides a sound overview of the concerns and debates that have plagued the ongoing ‘apprenticeship problem’ and demonstrates the ongoing contestation. This provides some explanation and context for the current picture of industry training, apprenticeships and the demands for training.

As demonstrated in the previous section, government attempts to either restrain or enable competing interests in this area have often been unpopular. Some voices have been particularly loud in their opposition to change, and legislative changes have not always resulted in changes to activities or behaviours. In some cases, Acts have required re-enactment or further legislation in order to ensure conformity to arrangements.

Despite all the changes, some themes emerge as unchanging in New Zealand’s quest for a skilled workforce. There is a history of relying on immigrant skills, the problem of who will bear the costs of training, the contestability over the mix of generic and specialist skills provided in training, apprenticeship quotas and wages and where training should best take place. Issues such as a perceived lack of esteem for trade, the disinterest of
employers in training apprentices, the quality of training and the type of training have all required navigation through actual and perceived skill shortages, technological changes and increases in demand for higher skill levels, through economic upturns and downturns, war and immigration.

The growing New Zealand colony of the early years relied on Maori labour and the immigrant population and there was little emphasis on training. Employers showed “little interest in promoting the instruction of their workers and … preferred to free ride on the training efforts of others by recruiting workers who were already trained” (Abbott, 2000, p. 93). In addition there was little demand for technical skills since “there was no great concentration of manufacturing” (p. 93). This tendency built in an attitude that sanctioned the idea of importing skills from other countries. Immigration New Zealand had an active policy in the 1960s and 1970s that provided a portion of the nation’s skilled workers through immigration (Kappert, 1997) and this is a position echoed in the current practice of the employment of skilled tradespeople for the Christchurch rebuild through the Immigration New Zealand Canterbury Skill Shortage List.

The traditional British apprenticeship system of trainees working alongside a skilled tradesperson was in operation in New Zealand from the very early colonial years. However, there were few laws controlling how apprentices were employed or engaged or how, or whether, they learned their trade. This situation was to be addressed in one of the first pieces of New Zealand labour legislation, The Master and Apprentice Act 1865.

This Act outlined minimum requirements for employers who were involved in the indenture of any child over the age of 12 years. The Act required provision of food for apprentices, clothing and bedding and made reference to attending church and instruction in morals. The Act however, made no provision for the prescription of terms and conditions or the supervision of apprenticeship contracts (Graham, 2009). It worked to benefit the employer who was thus more easily able to indenture destitute children (Graham, 2009) and did little to manage the child labour which occurred in some employment.
The lack of formal control eventually led to concerns that some children were being used as unskilled labour, were poorly paid or not paid at all while they learned their trade, and could be dismissed as soon as they completed their term. Jeanine Graham (2009) suggests the system was “widely abused” (p. 65), that apprentices were often overworked and underpaid and did not have adequate opportunities to sufficiently learn their trade, a view that is supported by newspapers of the time.

Newspaper items from the 1880s point to the need to check the excessive employment of ‘boy labour’ that lead to reduced positions and wages for adults and the ‘dishonourable’ practice of casting boys adrift once they have reached the level of a journeyman, (for example, “Injustice to apprentices”, 1885). The issue of the disproportionate amount of boy labour in industry was an ongoing topic of discussion for unions and employers of the period (Franks, 2001) and was contained in numerous union resolutions and strikes, such as the ‘Bootmakers’ strike of 1886.

The Masters and Apprentices Bill of 1894, introduced by Premier Richard Seddon, was designed to bring in changes to the 1865 Act to provide better protection for apprentices. This established minimum wages as a percentage of the wages of adult wage earners. It also sought to limit the number of apprentices to one for every four adult workmen (Graham, 2009). Clauses to ensure adequate instruction in the trade were included. However, opposition to this Bill was strong. In “Master and Apprentices Bill” (1894), The Press provided a summary of the bill and predicted strong opposition. The Press was correct and despite a number of attempts to have the Bill passed, opposition from employers was too strong. It was eventually withdrawn.

The most influential piece of labour legislation, the Industrial Conciliation and Arbitration Act of 1894 gave legal recognition to unions. This had a strong and direct impact on apprenticeship conditions. Apprentice’s conditions became a significant part of negotiations and bargaining between employers and unions and were therefore regulated on an award-by-award basis. Details included whether and how apprentices learnt their trade, their hours of work and minimum wages. Through the Act the legal enforcement of negotiated outcomes relating to hours of work and wages was enabled.
Essentially, this Act was responsible for reforms to the apprenticeship system, providing an improvement of conditions and training for apprentices.

However, James Holt (1980), an authority on the Industrial Conciliation and Arbitration Act suggested that, other than wages and hours of work, negotiations relating to apprentices tended to be focused on “whether and to what extent the number of apprentices in the skilled trades should be limited” (p. 185). That balance between the over- and under-supply of the labour market was an issue affecting both qualified tradespeople and employers. Qualified tradespeople were concerned to ensure their skills continued to be recognised and in demand, and employers were concerned to ensure wages for the skills they required were managed by a good supply of trained people. The quality of workmanship by skilled tradesmen had to be balanced by the cost of labour. This delicate balance in terms of quotas, labour market skill supply and quality of skills continued through the century and is still apparent today.

Unions and employers, of course, had differing opinions about the value of apprenticeships. Some industries were fully in favour of apprenticeships while others were not. In some cases employers, such as those in the sawmilling industry, were reported as not favouring apprenticeship, and seeing it as “being quite useless” (Is there any utility in apprenticeship? 1901). The union, in contrast, were in favour of a five-year apprenticeship. However, some apprenticeships such as that in the area of sawmilling fell into disfavour and “could not be revived” (Evening Post, 6 June, 1901, p. 2).

The 1865 Master and Apprentice Act was finally re-enacted in 1908, but was made subject to conditions under the 1894 Industrial Conciliation and Arbitration Act (IC&A). The IC&A Act had bought the employment of apprentices and the term of an apprenticeship under the control of the Department of Labour (Wareham, 2011) and, until 1923, the apprenticeship system was governed through the conjoint use of the Acts – “one to establish and safeguard the contract; the other to prescribe the conditions to be fulfilled within the contract” (Te Ara, 1966).

The next wave of legislative change to training and apprenticeships in New Zealand came in the 1920s. Changes to manufacturing processes and technological advancement
required different and more complex skill sets. New trades emerged while others disappeared (Murray, 2001). Labour market requirements dramatically altered; electricity use surged. New and recent innovations like cinema, radio and automobiles were evident and new industrial conditions meant new and increased skill levels were required by most industries. Added to this was the dramatic halt in 1921 to the post-war economic boom. Unemployment increased as agricultural prices fell and the labour market further plummeted due to the economic effects on Britain, New Zealand’s major trading partner, of the American stock market collapse in 1929.

The concern about the lack of apprentices and the perception that work in the trades was less desirable than more ‘genteel’ professions is highlighted in a 1923 article in the Wellington-based Hawera and Normanby Star entitled, ‘Boys Employment Crafts or Dead-End? An Official Warning’. The point is made in the article that “dead-end” employment in more immediately well-paying jobs was more attractive to young people. This was seen as detrimental to the development of the Dominion, which was experiencing a “serious shortage of skilled workers” (Hawera and Normanby Star, Wellington, December 17, 1923) and is another ongoing theme in the history of apprenticeships in New Zealand.

Changes to production meant that there was a need to ensure higher standards of training to ensure capability in new methods and techniques. There was however, a disinclination of employers to engage in technical education programmes (Abbott, 2000). In many cases apprentices were unable to finance their own higher training and both employers and unions sought government funding to meet the higher training needs. Following a conference between representatives of employers, unions and the departments of Labour and Education, specialist apprenticeship legislation was passed. The Apprentices Act of 1923 provided for nationally approved standards of training and formalized apprenticeship and training. This, like earlier forms, was designed to ensure an adequate supply of workers with the appropriate skills (Kappert, 1997). The 1923 Act also gave impetus to structural changes in the Technical Schools that had been set up by Hogben in the 1910s (see later in this chapter), which were now given a formal role.

The formal entry of two other parties to the training regime began: Technical Institutes,
where apprentices were to gain part of their training in recognition of the increased technological skill requirement, and voluntary District Apprenticeship Committees for each industry to oversee apprenticeships. The Arbitration Court continued to play a part in the governance of apprenticeships and was empowered to make orders regarding wages, hours and conditions, the proportions of apprentices to journeymen, the period of apprenticeship and the minimum age of apprenticeship in any industry. However, the apprenticeship committees took over much of the everyday functions of managing apprenticeships. These local committees could “watch the progress” of apprentices to ensure they adequately learnt their trade (*The Hawera and Normanby Star*, 1923, p. 7.), they controlled the wages, conditions and hours of work and the period of apprenticeship which were usually between three to five years (Murray, 2001).

Employers however, were not entirely happy with the changes to apprenticeships in the Apprentices Act of 1923. They were concerned that the Act weighed too much in favour of apprentices and disadvantaged employers. In particular they objected to the requirement to allow apprentices to study during work hours (Murray, 2001). Many resisted the requirement to allow for daylight training. There were calls for the government to repeal the Act.

This unrest partly led to an Apprenticeship Conference in 1929 attended by employers, workers, the Education Department and Labour Departments that was convened to rework details in the 1923 Act. At the forefront of the proceedings the chairperson expressed the importance of the work of the conference to ensure good quality training through both “the method and extent” as of the “utmost importance” (Murray, 2001, p. 2) along with the adequate supply of skilled persons. Attendance at the conference by members of Apprenticeship Committees and those appointed by Apprenticeship Committees as well as the Director of Education and the Secretary of Labour was identified by W. A. Veitch, the Minister of Labour as “a national responsibility”, “for the common good of all people and the general advancement of the whole Dominion” (p. 2).
Of the many items discussed at the conference there were continuing issues of training to meet skill requirements, the necessity and value of teaching theory and practical components in any given trade as well as how each of those components is best delivered – issues of concern still raised today.

The membership of Technical School Boards and Apprenticeship Committees was a point of contention at the conference while the role of Apprenticeship Committees and payment for committees’ expenses were discussed. The Apprenticeship Conference minutes made note of discussion on the amount of time apprentices should spend at technical schools, correspondence classes for country apprentices, the issue of the unequal salaries of technical instructors with degrees and manual instructors with trade qualifications, apprentice quotas and unemployment concerns. There was considerable discussion about the responsibilities of the state and the employer for funding and training. This centred on payments of fees for apprentice training in technical schools. Whether, and by how much, “Apprenticeships should be the whole function of the State” was discussed. Finally, forty-seven proposals were discussed to improve the “Apprenticeship Problem” (Murray, 2001, p. 18).

Amendments to the 1923 Act had occurred in 1927 but by the early 1930s there were still demands for change. Concerns about a lack of skilled labour in New Zealand continued to appear in newspapers throughout the early 1930s. Apprenticeship problems were highlighted in the Guardian (28 August, 1934), which raised concerns about the breadth of training, the question of technical schools and the importance of trade vacancies being filled by young New Zealanders. Employer petitions were presented to the government at the end of 1934. In “Urgent Problem. Training of Youths. Work of Skilled Trades. Few Apprentices” (1934, p. 9), concerns were raised at the lack of apprentices. Employers stated that the length of the apprenticeship term (five years) was too long and that apprentices should be apprenticed to the trade rather than the employer. Similarly, in “Work for Youth – Government Censured” (1935, p. 13), the government was criticized for having made it impossible for employers to keep apprentices.

An improvement in the economy in the mid-1930s, together with the election of a Labour government in 1935, provided for an increase in the numbers of apprentices. In a
newspaper report “Training for Trade” (1936) concern was raised that “conference after conference has warned the people of New Zealand that there would be a shortage of skilled labour and that would mean importation of skilled labour”, and in, “Lack of Apprentices” (1938) the “anxiety” of the new Minister of Labour to find a solution to the lack of skilled labour that satisfied both the “Labour” people and the employers is outlined. The call for ‘more elasticity’ in the apprenticeship terms as well as a scheme for apprentices to attend technical training centres (“To meet industry’s need,” 1938). Free tuition was provided for apprentices at the Technical Schools while the government paid a subsidy to employers (Murray, 2001). Adult apprenticeships were encouraged, assistance was provided to purchase tools and apprentice numbers improved. Despite the upsurge in apprentice numbers however, skill requirements were largely unfulfilled and a scheme to import tradespeople from Australia was instigated. This ended with the outbreak of war in 1939.

Tensions between employers and technical schools nevertheless continued to be evident. The Evening Post (1935, p. 17) reported that the Director of the Wellington Technical College in a prize-giving ceremony speech recognised the importance of the co-operation between the “industrialist” and the “educationalist” yet made particular reference to the “laissez faire” attitudes of employers which prevented good training. His speech continued that the importance of the technical colleges was to fill the technological gaps in training.

However, The New Education Fellowship, an international group promoting educational improvement and pedagogical reform had an influential membership active in New Zealand in the 1930s and 1940s. A significant conference held in 1937, supported by the Labour Government and set up by Peter Fraser (as Deputy Prime Minister and Minister of Education) brought to New Zealand a range of overseas educationalists and reformers to stimulate debate in the educational field. Although this far-reaching conference laid the basis for the shape of the later education sector, vocational education is noted more for its absence than anything else. There were a total of only four references to vocational education throughout the conference despite papers relating to “educational democracy” and “equality” (Abbiss, 1998).

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The *Evening Post* (“Important Issue. Apprenticeship case”, 1944) highlighted the confusion relating to apprenticeship orders in the early 1940s, and made particular reference to apprenticeship orders and contracts, specifically who had entitlement under the law to appeal contracts or the power to rule on contracts.

With the end of World War Two, the shortage of skills intensified. The Apprentices Amendment Act of 1946 and the Apprentices Act of 1948 had resulted from a 1944 Commission of Inquiry into Apprenticeships (Te Ara, 1966). Servicemen returning from the war compounded concerns relating to changes of apprenticeship orders and the consequential confusion around apprenticeship details. Some had joined the war effort part-way through an apprenticeship and had returned with less interest in their apprenticeship or the accompanying apprenticeship wage.

The lapsing of apprenticeships and a general lack of focus on ensuring those who had remained in apprenticeships achieved their qualifications during the war years were the main issues of concern (Murray, 2001) during this time. The Commission report recommended the appointment of an Apprenticeship Commissioner and four Deputy Apprenticeship Commissioners based in the four main centres to co-ordinate apprenticeships. These recommendations resulted in national apprenticeship committees, made up of union and industry representatives which replaced the voluntary and local committees set up in the 1923 Act.

While skills were in high demand, unskilled work still paid well and many apprentices were increasingly unhappy with apprentice wages. Skilled tradesmen returning from war commanded high wages to keep them in the trade. A Commissioner of Apprentices was appointed in 1948. This signalled a new apprenticeship order; with New Zealand apprenticeship committees set up in 12 industries which extended to 22 in 1949 (Murray, 2001). Apprenticeship wages were still set as a proportion of journeymen’s rates but compulsory training in technical schools was introduced (Abbott, 2000).

Previously, night courses in technical institutes had often failed to get adequate numbers of apprentices; and employers were still not generally in favour of daylight training given that wages had to be paid for the ‘unproductive time’ spent at a technical institute. The
unions made a case for daylight training arguing for the importance of high-level skills. By 1951, seven industries had a combination of block courses and night courses for apprentices and during the 1950s, 40% of all apprentices attended daylight training or courses (Murray, 2001).

A scan of newspaper articles from the period 1949-1950 indicates that there were a number of ongoing concerns that continued to be debated in the public arena. Quotas for apprenticeships, apprentice wages, the availability of daylight technical training and unemployment and youth vs. adult apprenticeships were all items of discussion. Trade standards and the quality and provision of training were issues that were regularly debated and reported especially in the *Evening Post* and the *Auckland Star* (see Papers Past website). Comparisons were made between the New Zealand, American and British systems of apprenticeship and training as possible solutions for the ongoing problem of skilled workers; the need for high-quality workmanship was debated. Employers, tradespeople, unions, technical institutes and the Department of Labour continued to discuss costs, courses and wages. Notwithstanding this, the numbers of apprentices continued to fluctuate.

Despite the changes to apprenticeships and the introduction of The New Zealand Apprenticeship Committees, the voluntary local apprenticeship committees continued to undertake a large amount of the administration of the apprenticeship system. An employer required the prior consent of the committee before he or she was permitted to take on an apprentice. However, eventually national apprenticeship orders replaced often-outdated local orders, while the setting of the wages of apprentices as a proportion of journeymen's rates became the standard (Murray, 2001).

A significant tributary in the continuing flow of trade-training initiatives during this period was The New Zealand Trades Certification Board (NZTCB) created by an Act of Parliament in 1949. The Board provided, for the first time, “a system of general provision for trade examinations in New Zealand” (Kappert, 1997, p. 51). The NZTCB had responsibility for moving each apprentice through a series of qualifications as well as to make provision for the examinations of those practising, or intending to practise, any trade. They set theoretical and practical standards that an efficient apprentice or
tradesperson should reach, issued certificates, provided incentives for tradespeople and apprentices to improve their knowledge and skill in their trade and established appropriate courses of study for the various trades (Kappert, 1997).

In effect Trades Certification Boards took on the functions that in Britain were under the British Craft Guilds regulating the supply of training. It was the responsibility of the NZTCB to certify institutions as suitable for the delivery of curriculum leading to examinations. It was intended that the NZTCB would be as autonomous as possible. With its own secretariat, it reported directly to the Minister of Education rather than the Minister of Labour.

Membership of the controlling board of the NZTCB included The Commissioner of Apprenticeship, representatives of workers and employers, technical schoolteachers through the Technical Education Association, the Post-primary Teachers’ Association, The Department of Education, the Plumbers’ Board, the Motor Trade Certification Board, the Electrical Wiremen’s Registration Board and a chairman appointed by the Minister of Education (Te Ara, 1966). The first examinations from the new Board took place in 1949 and by 1960 their examinations covered 31 trades (Kappert, 1997). Theoretical examinations set by the Board were undertaken in various teaching institutions. Apprentices were encouraged, but were not required, to undertake these exams. They were however, required to undertake the learning prescribed by the Board.

The two decades following the Second World War were stable and marked by a “general settlement regarding apprenticeship training” (Murray, 2001, p. 100). A booming economy, strong employment and strong economic growth along with the scarcity of skilled labour contributed to a peak period for apprenticeship in New Zealand.

The early 1950s to the mid-1960s marked an increase in technical education. A number of elements worked together to gradually shift the focus of trade training and apprenticeships from industry towards technical training institutions. These included two-year residential courses for Maori carpentry apprentices followed by other trades, which was provided by technical institutes and funded by the government rather than employers, the development of the New Zealand Certificate in Engineering in response
to the demand for more technically skilled workers to work alongside Engineers and undertaken in Technical Institutes, and the establishment of the New Zealand Council for Technical Education (NZCTE) in 1959. The main duties of the council were to advise the Minister of Education on matters relating to training and education for commerce and industry and to foster stronger relationships between technical education, industry and commerce (Murray, 2001).

With the establishment of the NZCTE in 1958 the apprenticeship system and the education system developed even closer links. Industry became more involved in the development of examination prescriptions for trades delivered through educational organizations. However, there continued to be tensions around the off-job, technical education component of apprenticeships, particularly in relation to when it should occur, who it should include and what it should entail. By the 1950s the structure of the apprenticeship system included National Apprenticeship Committees, the NZTCB, apprenticeship commissioners, technical colleges, industry, employer and worker organizations as well as the departments of Education and Labour.

The NZCTE was designed to ensure a close connection between apprenticeship and all other authorities associated with technical education and apprentice examinations. The Commissioner of Apprenticeship had links to both the Council and the New Zealand Trades Certification Board. Industry involvement was sought in the development of examination prescriptions while examinations were instituted only at the request of the industry involved. The development of learning content was the result of employer and worker organisations working closely with the technical schools and technical tutors to ensure that the prescriptions were closely related to the need of the industry (Dunstall, 1993).

The economic shifts in the late 1960s, along with increased automation and the introduction of new industries during this period, increased the demand for more skills and higher skill levels. This was set alongside the now familiar tension of high-demand, low-apprenticeship numbers and low apprenticeship completions. There was an ongoing need for increased and more advanced technical and vocational education and this continued to be discussed through education conferences and inquiries including the
Industrial Development Conference of 1960, the Commission on Education in New Zealand, 1960 and at the Commission of Inquiry to Vocational Training, 1965 (Kappert, 1997).

Employers and many politicians saw the apprenticeship system as overly administrative and rigid. Concerns were raised about the future of training and skill levels and criticisms were levelled at the unresponsiveness of the apprenticeship system to technological and economic changes. By the middle of the 1960s, skilled tradespeople were again in short supply, but unemployment had started to rise. Employment figures were particularly low among Maori, Pacific Islanders and unskilled workers (Kappert, 1997). Skills training through trade training schemes were employed as a response to unemployment.

The 1965 Commission of Inquiry into Vocational Training was set up. The terms of reference for the Commission were to inquire into all vocational training at all levels and in all industries. Chaired by Sir Arthur Tyndall, an engineer by training and Judge of the Court of Arbitration, the Commission also included two union representatives, two employer representatives and one technical education representative. Known as the Tyndall Commission it was to report on the change required for vocational training in New Zealand based on the growing pace of technological change, economic development and population growth.

The Commission’s findings suggested that a more systematic approach was required for apprenticeships. The view was that there was a need for more broad-based training within apprenticeships and that trade specialization could be built upon following completion of the apprenticeship (Kappert, 1997). As a result, the terms of apprenticeships were reduced in many trades and recommendations to improve the formal training components of apprenticeship in response to the growing pace of technological change were heard (Murray, 2001).

The Commission commented favourably on the successful functioning of the NZTCB and its co-operative and relationship-building role in linking with industry. The report supported the existing system where employers certified the practical abilities of apprentices and the gaining of the requisite theoretical knowledge at technical classes and
Institutes of Technology. Kappert (1997) identified that this was a “dual system of vocational education” (p. 310) and suggested that plans for its continued development were undertaken.

The New Zealand Council for Technical Education was disestablished. Having acted only in an advisory capacity and not having had any full-time staff, it was perceived to have failed to function as an advisory body to the Minister of Education (McLaren, 1974). In its place was established an independent organisation the Vocational Training Council (VTC), representative of industry and education to oversee the planning, co-ordination and development of vocational training courses (McLaren, 1974). The VTC membership included representatives from the Ministry of Education, the Ministry of Labour and various industry representatives. Set up by government statute in 1968 the VTC followed many of the recommendations from the Tyndall Commission and was charged with advising government, industry and business on the improvement of vocational training (Murray, 2001).

The objectives of the VTC were to raise the standards of knowledge, skills and effectiveness in vocational training, to ensure that people as individuals had the opportunity to develop, and to generally encourage the implementation of organised training and development (Murray, 2001). The establishment of VTC and the development of its 26 training boards required for the first time some systematic co-ordination between the needs of industry and the education provided by the technical institutes.

The VTC encouraged each industry at this time to form their own training boards. These industry training boards linked with polytechnics and national apprenticeship committees in both advisory and consultative functions (Kappert, 1997). Following a government budget allowance in the 1971 government budget, Industry Training Boards were formed. The functions of these boards were the same as the VTC, but were restricted to particular industrial or commercial groupings. Their structure was like the VTC with representation from employer groups, employee groups and appropriate government groups. Industry Training Committees were set up in relation to smaller industries. Technological examinations run by the Department of Education began to be replaced
with Trade Certificates and Advanced Trade Certificates run by Industry Training Committees.

The pressure for the reform and modernisation of the apprenticeship system again steadily grew. A skilled labour force was seen as a vital component for the future development of New Zealand and the system, as it was, was seen as too slow to adapt to the increasingly complex technological environment and unable to deliver the theoretical knowledge required for a modern setting. Therefore the VTC recommended to Government that the proportion of time spent in formal study should be increased and that general studies should form part of the formal studies component. A continuous review of the requirements for each trade was also called for. Employers expressed concern that they should bear the burden of paying for the general studies component of training, stating that they were only interested in apprentices gaining skills and knowledge relating to their particular industry.

Economic conditions tightened in the 1970s as Britain moved trade allegiances to the European Economic Community. Established in 1970 the Apprenticeship and Related Trade Training (ARTT) Committee for the VTC delivered its first report in the same year. That report highlighted concerns around the low status of trades and the small wage for apprentices. The report argued for the idea of competency rather than time served for progression in apprenticeship and there was discussion about the appropriate amount and quality of the education or off-job component of trade training. Whether an apprentice was apprenticed to industry or to the state was raised again as it had been in 1945. Taking into account the earlier Tyndall Commission findings, this council recommended an overhaul of the apprenticeship system.

Apprenticeship numbers were low and wages for unskilled workers attracted workers away from apprenticeships where wages were low. Echoing concerns from the 1930s when apprenticeships were under pressure, there was public discussion about the status of trades as a significant reason for a shortage of skilled tradespeople. In a report by the Department of Labour to the VTC’s Committee on Apprenticeship in 1972, a number of areas relating to apprenticeships were highlighted. Improvement measures for retention were called for as well as more attention to selection and recruitment processes.
Induction processes and more counselling and advice for apprentices during their apprenticeship were recommended. There were suggestions relating to the development of improved wages for fully skilled people, and the idea of developing a semi-skilled workforce was suggested to improve apprenticeship numbers (Murray, 2001).

However, broad scale changes were yet to come. The early 1970s saw changes which Murray (2001) describes as “pragmatic tinkering” and “piecemeal reforms” (2001, p. 124) rather than any wholesale effort to improve the outcomes of apprenticeships in New Zealand. Despite minor changes to the Apprenticeship Act the system remained essentially the same. Individual apprenticeship committees developed solutions to combat shortages in their own industries and short-term local schemes were put in place in an attempt to resolve skill shortages.

A number of seminars and conferences during 1977 discussed the apprenticeship system (Kappert, 1997; Murray, 2001). These included the Employers Federation Conference and that of the Technical Institute Association. It was considered that the skills problem for employers and the inability for young people to find apprenticeships were due to economic uncertainty (Murray, 2001). The criticisms raised over this period about apprenticeships included the educational component, the restrictive administrative processes and the complexity of the system. The National government of the time under Prime Minister Robert Muldoon ran a strongly regulated economy and was intent on increasing apprentice numbers. It thus provided cash incentives to employers who took on new or more apprentices.

The key trend of the 1970s was that a much greater proportion of training for apprenticeships started being carried out in technical institutes (Abbott, 2000; Kappert, 1997). Apprenticeships continued to include an off-job component, undertaken at polytechnics and along with an on-job component, generally under a time-served model although there was an increased shift to measuring competency over time served.

However, while there was a prevalent view that the educational component of apprenticeships should remain compulsory, there was ongoing and increased dissatisfaction with the theoretical aspects of apprenticeships delivered in technical
institutes. As had been raised in previous years, employers were particularly concerned to eliminate any time ‘wasted’ on learning that was not directly trade related. Hence the ongoing conflict between what is deemed training and what is seen as education.

The VTC prepared a paper in 1977, “Review of Apprenticeship: Discussion Paper”. The paper reflected industry’s concern with the apprenticeship system (Kappert, 1997, p. 66) and was circulated widely for comment. There were concerns about the imbalance between supply and demand of trade skills and the quality and organization of on-job and off-job training. A key concern outlined in the paper was the level of skill and the paradox of increased technical requirements in some areas and the deskilling of other occupations. There was some discussion about aligning allied trades.

The VTC proposed a revised trade system. This included a recommendation that Industry Training Boards link with the Manpower Planning Section of the Department of Labour (Kappert, 1997; Murray, 2001) to ensure that planning for future labour and skill needs were co-ordinated. The council also recommended the improvement of on-job training through training manuals and instructor training for all those involved with the instruction of apprentices as well as visits from local apprenticeship committees (Kappert, 1997). The idea of a stratified training system was suggested which included initial transferable skills followed by specialist skills. It was acknowledged that many employers would find it difficult to provide broad-based skill training to their apprentices, given the number of apprentices in small businesses. The council urged that their recommendations be heeded if the skill requirements for New Zealand were to be met into the future.

By the end of the 1970s with unemployment growing, pressure was deepening for a more thorough overhaul of the apprenticeship system. This continued into the early 1980s. Changing labour market conditions through economic and technological changes during this period and a shift for New Zealand from a protected to an open economy, along with rising inflation, a drop in manufacturing and an economic downturn put pressure on the apprenticeship system. Rising skill requirements by employers, the disappearance of many jobs formerly undertaken by school-leavers and fewer jobs covered by apprenticeship arrangements were identified in a Department of Labour report of the
1980s as contributing to dwindling apprenticeship numbers (Ministry of Education, 2010).

Calls for a more skilled and adaptable workforce were made and once again dissatisfaction surfaced at a perceived lack of adaptability and flexibility, and inability to respond to changing skills needs. Employers were concerned at the “highly regulated and bureaucratic” system (Ministry of Education, 2010, p. 7) and frustrated at their lack of ability to change training based on industry needs. It was difficult for new industries to enter the apprenticeship system and thus gain the benefits of government incentives, and it was difficult for apprentices to move within and over to new industries.

Change to the system eventually occurred with the Apprenticeship Act 1983. This Act provided for different types of apprenticeship contracts. It aimed at encouraging more young people into apprenticeships, primarily school-leavers. The Act detailed the set-up of the new New Zealand Apprenticeship Committees and, as with earlier apprenticeship Acts, outlined procedures around setting apprentice employment conditions and wages in relation to qualified workers. Under the 1983 Act the individual committees were empowered and encouraged to recommend changes to apprentice training. The idea of pre-trade training or pre-apprenticeships funded by the government to prepare young people for work in the industry was developed and put into use.

The 1983 Act, however, did little to reform the apprenticeship system. Murray (2001) asserted that the Act contained “more potential than solutions” (p. 150) and Kappert (1997) suggested that, although the apprenticeship system had been subject to sustained criticism, vested interests and complacency meant that no radical changes were made.

However, major change that affected the whole of education and employment system was to come. Upheavals in government administration began in 1984 and major reform of education administration and financing across all sectors of education was approaching. Between 1987 and 1993 the education system experienced unprecedented change. The main thrust of the reforms was to decentralize educational administration, devolve decision making and more tightly manage funding mechanism (Perris, 1998). The Report on Post Compulsory Education and Training (The Hawke Report), and The
Royal Commission on Social Policy, were both released in 1988 and the Government’s response for the post-school sector was “Learning for Life”, 1989 (Abbott, 2000).

The Hawke Report (1988) was criticized for its lack of consultation with tertiary institutions and generated much negative reaction (Perris, 1998) for its recommendations. These recommendations included the establishment of a National Qualifications Authority, funding formulas, a requirement for students to contribute to tuition costs by paying a standard fee and the setting up of a student loan scheme (Gobbi, 1998). This had impacts on the apprenticeship system given the increased amount of training being undertaken in the polytechnic system.

The large-scale reform to public sector institutions during the 1980s along with a shrinking of the manufacturing sector resulted in a remarkable fall in apprenticeships during the 1980s and 1990s. Large state-owned enterprises, such as New Zealand Rail, New Zealand Post, the Ministry of Works and electricity power boards which had formerly trained huge numbers of apprentices, shifted to profit-oriented enterprises that no longer undertook large-scale training. The problem of managing skill development in a small nation traditionally comprised of many small-to-medium businesses became compounded. Unemployment rose and the lack of skill training went unchecked. A twenty-year hiatus in skill training occurred and little training was picked up from the large enterprises (Interview, Bernie).

The 1989 Department of Labour Report “Further Education and Training of the Labour Force” outlined the continued sharp decline in apprenticeship participation (Department of Labour [DoL], 1989). The report, prepared at a time of considerable debate, detailed a 25% decline in apprenticeships in the five years to March 1989 (DoL, 1989). The report also provided an overview of the different functions of those involved in apprenticeships/industry training; trade unions, private tertiary institutions, non-formal training organizations, certification authorities including the Authority for Advanced Vocational Awards (AAVA) and the Trades Certification Board, 35 national apprenticeship committees and approximately 350 local apprenticeship committees as well as over 80 other organisations/registration bodies. The apprenticeship system had a huge and growing membership and lacked cohesion.
The report noted in its conclusion that trades and technical education “have been supplemented by a range of transition education and labour market training programmes” (Department of Labour [DoL], 1989, p. 21). This, they suggest, has provided a “varied pattern of provision [which] has evolved over time with separate arrangements for funding and certification and different accountability structures for training providers across the PCET (post compulsory education and training) sector” (p. 21). The report notes the greater amount of training undertaken in the polytechnic system marking a blending of skills training and apprenticeships as occurring across both industry and education. This marked an ideological shift of apprentices to being part of the PCET sector.

There was a call for an increase of funding to the PCET sector. Much of the second half of the 1989 report details the costs of training and how the costs can be managed and spread across stakeholders. Here, further education is identified as a “personal investment” (DoL, 1989, p. 29) by individuals and employers are encouraged to see that “investments in human capital” (p. 30) are a benefit to increased profit-making. Once again the debate between generalized and specific training is developed to address the distaste of employers for training in skills non-specific to the particular work of the trainee with the suggestion that an employee may undertake training outside of work hours or receive a lower wage during their training period.

In this report the role of government was identified as one of “funding and monitoring the provision of tertiary education” (DoL, 1989, p. 33) with an aim to improve quality of institutions in receipt of state funds. That tertiary education and training offers wider social benefits and is an important aspect in terms of social benefits and equity is highlighted in the report as a reason for continued government funding. The report suggests that private provision of further education and training will not produce equity or efficiency benefits.

The report signals the direction of major reform of the post compulsory education and training environment, particularly in terms of funding mechanisms and qualifications arrangements. For apprenticeships in particular reforms are detailed in the report to
include improvement to the quality of training through “more systematic training and competency-based assessment” (DoL, 1989, p. 39), in line with the earlier Hawke Report’s signal for national qualifications systems. The report also pointed to a review to assist more women into trades.

Technological changes, economic changes, unemployment and transition from school to work issues are identified in the report as being factors in the generation of demands for ongoing training and a more skilled and adaptable workforce.

The Industry Training Act followed in 1992. The Minister of Labour for the newly elected National Government appointed a working party in 1990 to provide advice on apprenticeship and industry-based training. This led to the Industry Training Act of 1992, which markedly changed apprenticeships in New Zealand. The Act set up ITOs as the key organizations to manage apprenticeship training and completely altered the management and process of training in New Zealand.

The Industry Training Act of 1992 thus removed all of the ideals and constraints of the traditional apprenticeship scheme. Any form of a time-served model was replaced by a complex set of unit standards, while trade certificates were replaced with National Certificates set by Industry Training Organisations. The Act repealed the Apprenticeship Act of 1983 and described the role for ITOs. ITOs became responsible for the setting of nationally recognized skill standards for industry. It became their responsibility to develop arrangements for the delivery of training, to monitor training quality and moderate assessment. ‘Apprentices’ largely became ‘industry trainees’ and several industries that had not been covered under the apprenticeship system joined the industry training system (Murray, 2001). By 2004, ITOs were required to demonstrate that they were representative of employers in their industries.

This was a period of immense change for apprenticeships in New Zealand. The simultaneous introduction of the Employment Contracts Act of 1991 disestablished the Arbitration Commission and moved some of its key functions to the Employment Court. Other functions like wage fixing and determining variability and relativity of wages
between and within occupations disappeared including the issuing of apprenticeship orders.

The competency-based education model had developed in the 1990s with the introduction of the National Qualifications Framework and Unit Standards. The Education Training and Support Agency (ETSA), was set up as a Crown agency in 1990 taking on the role of supporting the employment side of the apprenticeship system thereby picking up much of the role undertaken by earlier Apprenticeship Committees. ETSA changed its name in 1988 to Skill New Zealand moving to become part of the Tertiary Education Commission (TEC) at the beginning of 2003. Training Agreements replaced apprenticeship contracts between employers and apprentices and the ITO, and wages and conditions were set according to the Employment Contracts Act of 1991.

Industry Training Organisations, set up under the Industry Training Act 1992 as SSBs now heralded a new training system based around ITOs as representatives of industry. Their function was to set national standards and qualifications and ‘purchase’ off-job training on behalf of trainees. They were responsible for administering training and employed registered assessors to assess students/trainees in the workplace. Trade certificates were replaced by National Certificates awarded by NZQA on completion of unit standards set and monitored by the ITO and gained in the workplace as well as at tertiary providers.

A government review of the funding for Industry Training in 1995 outlined government preferences for industry-based training. This included general rather than specific training, training that was based on the National Qualifications Framework, supportive of under-represented groups and cost efficient. The roles for ITOs were addressed to include more detailed activities relating to information and advice to trainees and employers, arranging for on-job training and assessment, purchasing off-job training and arranging the monitoring of training quality (Green, Hipkins, & Murdoch, 2003). Between 1992 and 2003 the funding system for industry training changed four times (Ministry of Education, 2010).
With a change in government in 1999 there was once again another review of the post-compulsory education system. The review focused on broadening and deepening industry participation, raising foundation and generic skill levels and lifting the participation of under-represented groups (Green, Hipkins, Williams & Murdoch, 2003). Low numbers of young people entering the industry training environment forced the government to reconsider apprenticeships and a 2001 review of industry training took place. Concerns in relation to workmanship and high-quality trade skills were highlighted and concern was raised about the deregulation of the industry, in particular where certification and training were no longer essential.

The Modern Apprenticeship Act came into force in 2000. This Act was designed to encourage employers to employ more, and younger, people within the scheme. It was also designed to ensure there were systems in place to improve the quality of training. A brokerage service where ITOs broker arrangements with industries, employers, trainees and training providers was made available through the programme to reduce the costs to employers employing and training youth.

The 2001 review of industry training found that a proliferation of ITOs caused problems for employers who may need to work across a number of organizations. With 47 ITOS in existence in 2001 there were gaps in coverage across industries and in more rural areas. Concern was raised at the ability of ITOs to successfully engage employers in ITO decision-making. The review encouraged amalgamations and alliances between ITOs and changes to the Industry Training Act included a funding focus on performance and the requirement to develop strategic training plans that promote training to meet the needs of both employers and employees.

Ongoing reviews have identified concerns about the performance of the system: in particular, about low completion rates, and a wide variance of performance across industries (Ministry of Education, 2011). Changes to funding mechanisms have linked performance with funding eligibility and this includes trainee outcomes and progression and literacy and numeracy requirements as part of all level 1 and 2 training. Once again an overhaul of qualification design was called for and is currently under way. More support for trainees has been called for.
Alarm at youth unemployment shown in the numbers of people categorised as NEETs and set against the trade-skill shortage has continued to be at the forefront of policy making relating to apprenticeships and industry training in the past. The Welfare Working Group (2011) in its Reducing Long-Term Benefit Dependency Recommendations identified trade education as a mechanism to address youth unemployment and reduce disengagement from traditional schooling. Trade Academies, trade training and apprenticeships are all identified as mechanisms to engage young people in either schooling or work.

The continuing ‘skills panic’ during the mid-to-late 2000s repeats a similar pattern of concern in relation to the ability of the New Zealand economy to compete in a global market. Literacy and numeracy concerns highlighted later in this thesis mirror the waves of skill panic which have preceded dramatic reforms since the 1890s. These are an example of the sector’s dramatic changes of direction as policy attempts to maintain a skills balance.

More recent apprenticeships reforms have followed from an industry training review undertaken in 2011. The 2011 review followed audits of ITOs in 2009 and 2010 and sought wide feedback. Legislatives changes to the Industry Training Act 1992 and the Modern Apprenticeship Training Act 2000 are currently under a new Bill (Industry Training and Apprenticeships Amendment Bill, 2013) and were announced in January 2013 (see http://www.beehive.govt.nz/release/new-zealand-apprenticeships-boost-skills-amp-support-jobs). Here Modern Apprenticeships become New Zealand Apprenticeships, the minimum educational content of apprenticeships is documented, roles and performance expectations for ITOs are identified and allow employers direct access to industry training funding. Most importantly, the role of ITOs has been clarified and their role as skill leaders for industry has been removed. NZQA will have a greater role in the quality assurance process for recognizing ITOs and a pilot scheme to enable employers to access industry training funds directly means greater competition for ITOs.

An apprenticeship ‘re-boot’ initiative outlined by Minister Joyce (“Apprenticeship reboot extended to 14,000”, 2013) was enacted in 2013 and was reported to provide 14,000
places which provided $2000 to people who sign on as apprentices in priority trades. The idea is suggested as one that could accelerate a recovery in industry training that has experienced a sharp drop in trainees. The revamp also aims to remove “phantom trainees” who are not achieving any credits.

The current New Zealand Apprenticeships model removes age limits. Clearer expectations for ITOs are provided with employers having other options if ITOs do not perform. The new system intends to reward both employers and workers by providing one-off early-entry subsidies for trade-related tools and a boost for employers.

Reducing the number of ITOs and the proliferation of qualifications continues to be high on the agenda of the new policy environment. The goal of the Targeted Review of Qualifications is to reduce the number of qualifications in the levels 1-6 arena from 4,600 at the beginning of 2008 to 1200–1300 at the end of 2014. Similarly the government aims to have larger and fewer ITOs with a goal of 12–15 as opposed to the 39 in existence at the start of 2010.

Absorbing the roles originally undertaken by Trades Certification Boards and Apprenticeship Committees until 1987, ITOs have had an enormously important role as developers of qualifications and assessable standards through NZQA. In a sense they became the guides and guardians for quality through apprenticeships. The introduction of the qualifications framework and the systematic increase of a training culture by industry for industry (Kappert, 1997) was designed to ensure a more responsive and flexible system. Industry Training Organisations have operated as corporate bodies to ensure and assure standards, to lead skills development and provide training. However, the concerns relating to the inflexibility and bureaucracy levelled at Trade Certification Boards in the 1960s have quickly became mirrored in this new environment.

In 2013, measures to manage the ITO environment were under way. The identified lack of consultation with stakeholders, a high level of funding with low-level returns, a low level of completions and credit attainment, patchy coverage, phantom trainees (Cabinet Business Committee, 2013) setting up and operating as PTEs in competition with ITPs, a
proliferation of qualifications and lack of stakeholder engagement have damaged the reputation of ITOs.

Currently industry training is identified as “government-subsidised workplace training that leads to qualifications targeted at entry-level and low-skilled workers” (Cabinet Business Committee, 2013, p. 3). Introduced in 1992 it is a system of ‘vocational training, foundation education and continuing vocational education for employees’ (p. 3). Further, the paper argues that in order to achieve wider economic results and social goals, including the Better Public Services target of 55% of 25–34-year-olds holding a qualification at level 4 or above, the system must be “educationally sound” (p. 10).

Currently, in 2014, apprenticeships and pre-apprenticeship training is delivered in a variety of places through a variety of means: trade academies, youth training schemes, polytechnics, private training establishments and in schools, and through Maori and Pasifika Trade Training schemes. These schemes, according to Minister Joyce, the Minister of Economic Development and Tertiary Education, Skills and Employment, in a May 2013 Press Release, are linked to “Government’s ambitious goals around raising living standards through a more productive and competitive economy” (“Expansion of Maori and Pasifika trades training”, 2013). The problems of quality training and delivery, who controls trade education and training and how best it is delivered to ensure high quality craftsmanship and highly skilled tradespeople are not considered.

In an industry-led training environment, tutors, trainers and teachers have become invisible. Their technical expertise and discipline-based teaching know-how is overlooked. While their role and positioning within the training regime has been perceived as more or less important based on different governments and policy positions, a registering of their expertise in trade learning and teaching has been absent in recent discussions.

In seeking to improve the quality of industry training the government has increased quality assurance mechanisms through NZQA for organizations that develop qualifications and resources. If the industry training system is to deliver a quality
outcome of well-trained individuals and a highly skilled workforce, attention and care to this role must be considered.

Having had their teaching work marginalized in the compulsory schooling sector, as outlined in the next section, trade tutors work within polytechnics as trade teachers, off-job or pre-trade trainers and educators. Polytechnics are their recent ‘home’, yet this is a workplace that has shifted over time. The next section of this chapter returns to education and tracks the development and eventual demise of technical schools and the development of technical institutes, polytechnics and technical education.

Section 2. Schooling and technical education: A trade and technical gap

Formal technical training and education in New Zealand has a history of individual or small group attempts to provide required skills and training related to employment. Early private and local community attempts to establish vocational education and training in New Zealand on a permanent basis proved unsuccessful (Abbott, 2000, p. 93). Over the decades, government intervention has been required to establish firm and reliable technical training opportunities.

Technical education, as it was called, had been offered in the main cities since the 1890s, but it was fairly random in its provision. Some secondary schools had provided some semi-vocational subjects and there were a few continuation classes conducted in a “sporadic fashion” (Abbott, 2000, p. 93). However, other than in the Mechanics Institutes and in the School of Mines in the South Island (Abbott, 2000) and the Waihi School of Mines in the North Island there was no formal provision of technical education. In general, groups or individuals who had a professional or personal interest started schools for technical training. Students mostly paid themselves and classes were run in the evenings. These classes were often temporary, filling an immediate need. In general there was a reluctance and disinclination by both employers and secondary schools to deliver technical education or manual training.
As early as 1884 there was a call for increased attention to vocational subjects in schooling. In 1885 the Secretary of the Department of Education, addressing secondary school boards, advocated the inclusion of “subjects that have a direct bearing upon the technical arts of modern life” (Secondary Education, 1885, p. 3) Schools were urged to include more vocational and practical lessons and drawing. (Nicol, 1940).

In the 1890s government intervened. Parliament passed legislation in 1895 that provided for education boards and others to establish government-funded classes for technical instruction as part of the Liberal government’s education reforms through The Manual and Technical Elementary Instruction Act, 1895 (Thompson, 1945). Drawing, as a compulsory subject for a ‘standard pass’ in primary schools, was emphasised to form the craft part of a general, liberal education.
Secondary schools were not amenable to changes to their syllabus. Less than ten percent of New Zealand’s eligible secondary school age population attended secondary school by 1900, and attendance was largely by those who planned to attend university and enter the professions. Schools were under Boards of Governors and modelled on English Grammar Schools. Students were predominantly fee paying and boards were reluctant to institute manual or technical education.

While the Manual and Technical Instruction Act in 1900 increased the development of manual training in primary schools and allowed for the development of technical schools, secondary schools continued to have “…Greek and Latin authors read, and the number of Euclidean theorems…”, there was “scarcely any attempt at scientific or technical teaching” to relieve “the dull grind of the traditional English ‘public school’ curriculum” (Butchers, 1932, p. 131).

Concern at the inadequate level of skill to meet changes in the skill requirements in the New Zealand workforce was expressed. Despite the 1895 Act George Hogben, (1853-1920) as Inspector General of Schools and Secretary for Education noted in 1901 that:

> The secondary school programmes are framed to a large extent so as to lead up to the matriculation and junior scholarship examinations of the University – and yet not one boy or girl in twenty does or can go to the University. I leave the corollary to be deduced.

(Butchers, 1932, p. 132)

The reform of the syllabus proved difficult. Secondary school boards had refused the liberal grants offered under the Manual and Technical Instruction Acts of 1900 and 1902 and did not take up the opportunity to liberalise (Butchers, 1932, p. 135) their curriculum to include technical subjects. The Acts opened up the opportunity for technical classes to be conducted by an Education Board, University College Councils, Secondary School Boards, Municipal Councils or any other educational or local authority or association could open and provide technical schooling. Such councils, authorities or associations
were to be conducted by an incorporated Board of Managers, elected according to regulations in the Act.

District Education Boards and some of the voluntary Technical Classes Associations in some main centres established technical classes under the control of managers (Butchers, 1932, p. 125). Technical classes were thus established in schools and were well received. Attendance increased and schools developed to offer, as well as practical classes for which they were originally established, courses and subjects taught in traditional secondary schools.

It was not the intention of the Education Department to establish separate technical schools but to encourage secondary schools to teach technical subjects, thus creating the core of a comprehensive system. However, Wellington Technical College was established in 1905, Christchurch Technical College in the same year and in 1913 the Auckland Technical School was redesignated as Seddon Memorial Technical College. Schools that had once been technical evening colleges became day schools, taking up the generous grants to provide technical and manual training in the space left open by the reluctance of the secondary schools to engage with these areas (Thompson, 1945).

These day technical classes were well received and attendance increased so much so that, by 1907, Hogben, as Secretary of Education, suggested that a different form of secondary school in the form of a day technical school be established. The 1908 Education Act provided for the establishment of such schools and broadened the ‘free place’ qualification that had been imposed on Secondary Schools in the Secondary Schools Act of 1903.

The initial Government desire was to limit technical high schools to the four main centres. The underlying goal was for the adaptation of such courses to the secondary schools and district high schools and to thereby avoid an overlap. But again schools did not sufficiently adapt their courses and in 1912 technical schools outside the four main centres were sanctioned.
The final step was for the schools known as technical high schools to be organised as a separate branch of the education system under their own Boards of Managers and this was provided for in the Education Act, 1914. Evening continuation classes for which the schools had been originally developed continued and were conducted in association with the day schools. Payments made to the Boards were calculated on a pupil-hour basis rather than a teacher-hour basis as for ordinary secondary schools.

Interestingly, it was not until 1914 that the Education Department had any authority to prescribe the secondary school curriculum. The 1914 Act provided funding for secondary schools and advanced departmental and administrative level control. It was, however, the demands of industry and students that influenced the kinds of courses delivered.

In short, technical high schools were set up to undertake the work that academic high schools refused to do (Nicol, 1940). The schools were designed to cater for the needs of young people who had completed primary school but were too young to enter industry. They provided a more practical curriculum than the traditional grammar schools. Technical schools, originally meant as a preparation for evening school technical training and practical classes, developed to offer courses and subjects taught in traditional secondary schools.

W. S. La Trobe (1870-1943), the first Superintendent of Technical Education in New Zealand and former Wellington Technical College director (1903-1919), is widely recognised as establishing the New Zealand technical high school system. During his tenure as superintendent, La Trobe suggested four years free training at technical schools paid for by the state.

La Trobe suggested that technical high schools could fulfil ‘liberal education’ goals. He worked towards a balance between the humanities and specialised trades and science related work and had in mind both vocational and citizenship skills. La Trobe believed that technical schools could:

- Equip students for intelligent apprenticeship and citizenship
- Provide preliminary training for evening students
Furnish some students as a means to enter University or the specialised mining school with a view to higher work on the same lines.

(Nicol, 1940, p. 76)

Technical high schools initially had a difficult time for a number of years. They had grown in a haphazard manner and had developed in the space opened up by the refusal of secondary schools to include more technical and manual subjects within their curriculums. Many technical high schools struggled with inadequate equipment and accommodation. Admission to the schools had a lower educational requirement. The status of such schools was lower than that of secondary schools and they came to be seen as being more suitable for students who were unable or unfitted to undertake academic courses (Guscott, 2000).

Entrance exams instigated by secondary schools relegated many students to technical high schools for technical or pre-vocational education (Reid, 2000). Despite this technical high schools succeeded in preparing many of their students for mainstream matriculation examinations offered by secondary schools as well as preparing them for their own area of work. They provided all that a secondary school provided.

By 1910 the secondary schooling system resembled the British model where middle class and academic students went to a grammar school and the working classes attended a technical high school (McKenzie, 1992). Secondary schools resisted attempts to liberalise the curriculum and streamed students according to IQ tests and by the late 1920s technical schools were becoming less popular due to the notion that they were run along class lines. In 1925 a report on the New Zealand Education System commissioned by the Education Department suggested that technical high schools and secondary schools were duplicating their work and could be amalgamated. Technical training however, remained in demand. A 1928 report repeated the need to broaden education and increase the quantity and quality of secondary school provision.

With the support of Harry Atmore, then Minister of Education, the primary schools syllabus had been re-designed allowing teachers more freedom. A parliamentary report into the education system in 1930 known as the “Atmore Report” recommended a more
egalitarian approach to education and an increase in more practical and less academic subjects. It also advocated less of an emphasis on examinations. This report was seen as a progressive educational charter.

However, concerns about secondary schools’ lack of commitment to technical or vocational training continued. In his 1932 history of the New Zealand education system Butchers lamented the lack of response of secondary schools to include technical education and outlined some of the concerns for technical education under secondary school administration. He suggested that the orientation of secondary schools, including their teaching methods and resource selection was still mainly dictated by the “purely academic requirements of the University Entrance Examination, which has, unfortunately, been permitted to usurp the functions of a general secondary school-leaving examination” (Butchers, 1932 p. 140).

Despite the recommendations in the Atmore Report there was a period of retrenchment during the Depression of the 1930s. However, the Thomas Report of 1944 suggested a ‘curriculum for all’ and focused on a more egalitarian approach in the post-primary school curriculum. This report advocated a ‘common core’ curriculum for secondary schools and addressed the concerns of a narrow academic curriculum. High schools of all types were compelled to offer the same core curriculum. The interest of the report was to provide a curriculum drawn from practical and academic strands and make it compulsory up to the end of form four.

The Principal of Seddon Memorial Technical College, the technical college with the largest roll in New Zealand suggested that technical teachers knew more about technical education than members of trade committees. During a Commission of Inquiry in 1944 he had argued strongly for technical education and that technical schools should provide general pre-vocational and vocational courses because of the diverse nature of local industry. He ensured that the school controlled its curriculum.

Commentators and secondary school associations expressed some concern over the ideas in the Thomas Report and were concerned that the compulsory core curriculum would result in a ‘levelling down’ for academic students. Concerns were outlined that there was...
too much emphasis placed on craft subjects and that academic subjects would be marginalised. The 1945 Education Act abolished matriculation and replaced it with University Entrance. However, schools still resisted and streamed students according to their own systems.

Technical high schools and secondary schools continued to run in parallel but by the 1950s the demand for more skilled technicians and the move to daylight training meant there was pressure on technical schools for post-school technical training. Over this time the view developed that secondary education should provide a broad-based, subject approach to education and there were moves to shift technical education into more tertiary-level institutions.

This highlights a tension between ‘secondary’ education and ‘technical’ education not just in New Zealand but also in many western countries. Similar attempts to develop technical secondary schooling in the UK met with similar disappointments, due in large part to a reluctance by parents and industry (McCulloch, 1989, p. 7). A comprehensive school curriculum designed to prepare students for university (McCulloch, 1989) has prevailed and opportunities for curriculum reform have been overlooked.

In the 1960s an in-depth look at education was undertaken. The Royal Commission on Education published the Report of the Commission on Education in 1962. It was became known as the Currie Report (Scott, 1996) after the Chair of the Commission, George Currie. This report was the first in-depth look at education since the Thomas Report of 1944 and was the largest and most comprehensive report conducted on the New Zealand education system. It was a major government exercise. The report was intended as wide ranging. However, it largely focussed on administrative responsibilities and structures. There was only a small amount of attention to curriculum which recommended the establishment of a curriculum development unit within the Department of Education devoted to permanent curriculum and planning (Openshaw & Walshaw, 2010).

The Department of Education and the Curriculum Development Unit were disbanded in 1989 and replaced with the Ministry of Education at the recommendation of the Picot Report, “Administering for Excellence” produced by the Picot task force set up by the
government in 1987. This report, designed to address wide concerns about provider capture, gave the Minister power to publish national curriculum statements. There was a stipulation that teachers should not carry out curriculum development and The National Curriculum Framework was developed. This was followed by the Education Act in 1989, the Education Amendment Act in 1990 and the Education Amendment Act of 1991 which implemented most of the Picot recommendations (Levin, 2001).

The technical and skills-based curriculum had already changed dramatically in New Zealand starting in the 1980s and was generally more aligned to engineering and sciences than to traditional trade-based technology (Ferguson, 2009). Technology in the New Zealand Curriculum is taught at all levels of the New Zealand curriculum, and seeks to develop and train technologists rather than tradespeople. It is the design workforce (O’Neill, 2004, p. 179) with links to science, graphics, and biotechnology which influences a curriculum which is concerned with concept analysis, systems, models and products (Ministry of Education, 2007).

The teaching workforce during this time changed dramatically. In order to teach this curriculum, schools became required to employ people with a technological practice background. At the same time, traditional workshop teachers in schools were required to upskill under teacher industrial agreements and by a qualifications bar imposed in 2003 (Ferguson, 2009). This highlighted an industrial dispute about salaries in relation to qualifications that had been brewing. Teachers who had trained and were employed on the basis of their Advanced Trade Certificate were unable to move to a higher salary band. Some traditional workshop teachers undertook the upskilling and moved into the technology field, some did not. Many left the teaching profession entirely, while some moved into the polytechnic or tertiary environment.

In this way technical education and training as related to trades and technology came to be undertaken in polytechnics and other TEOs and many schools lost or gave up their technology workshops in favour of computer suites. Those that retained them had difficulty finding appropriately trained workshop teachers or those prepared to engage in teaching under the salary bar.
Certainly the supply and capability of technology teachers and the changed nature of the technology curriculum has meant a separation in terms of what is understood as technology and that which is trade or workshop based. Trade-based workshops within schools have virtually vanished by 2014, but not the requirement for the skills that this kind of learning afforded, hence we have a focus on trade academies as partnerships between polytechnics and secondary schools where workshops and trade tutors still reside.

Section 3. Technical Colleges and Technical Institutes: Filling the gap

As outlined above, polytechnics or technical institutes evolved out of New Zealand technical schools and colleges (Abbott & Doucouliagos, 1999) but their intent was different. This kind of education was firmly fixed as post-school education and aimed at those who had completed their compulsory schooling. Polytechnics, as they became known, have had a continuing and further education focus and have sat at the junction between schooling and work.

The Auckland Technical Classes Association started in 1895, the same year as the Manual and Technical Elementary Instruction Act, 1895, although there was little funding available until the Manual and Technical Instruction Act of 1900. The 1900 Act provided a shape for trade-related and technical education for the early 1900s. Local authorities were added to the list in Manual Technical Instruction Act 1902 and the 1902 Act provided more certain funding for technical education, with payments at every educational level for pupils who received instruction in approved ‘crafts’.

Nicol (1940) traces the history of technical institutes from mechanics institutes and other bodies such as the Dunedin and Timaru Caledonian Societies and through to the establishment of the schools of art in Otago (1870), Wellington (1885), Auckland (1890), The Technical Classes Association in Dunedin (1889) and a similar establishment in Auckland following a few years later. The Schools of Mines in the 1880s were part of a similar movement. The Manual and Technical Instruction Act, 1900, gave wide scope for continued education for those who wanted to further their education as well as those who sought advancement (Thompson, 1945).
The Wellington Technical School, established in 1905, pioneered links with industries, particularly the plumbing and electrical industries. This provided a model for technical training under the Apprentices Act, and according to Nicol (1940) this provided for a noticeable expansion in classes from the building and engineering trades in 1924 and subsequent years (Nicol, 1940). Employers, who in some cases donated the equipment and material necessary for practical training, met some of the cost of training.

While it was government interventions and grants that enabled the establishment of technical schools, it was student and industry demands that most influenced what was offered in the colleges. In 1928 the Education Department developed examinations for a number of trades including mechanical engineering, motor mechanics, building construction, carpentry and plumbing. However, many trainees preferred to sit the London City Guilds Institute examinations, as these were widely recognised.

Technical schools continued to offer a number of post-school programmes. In general these were mainly offered in the evenings due to employer reluctance to provide day release for employees. Training was government funded, given the inability of young trainees or apprentices to fund their own training and the lack of interest demonstrated by employers. These part-time courses were attended by both adults and young people and in conjunction with apprenticeships and on-the-job training in the workplace provided adequately for the skill acquisition needs of the time (Thompson, 1945). Facilities for the provision of evening classes were generally attached to those of the day technical schools. However, technical schools and colleges tended to concentrate more on their day school classes than these post-school programmes, since the demand for evening classes was not always high.

By the 1930s there were just over 10,000 people enrolled in technical classes in New Zealand. The numbers undertaking post-school technical education were over twice the numbers enrolled at the University of New Zealand and the two agricultural colleges combined (Abbott, 2000). Many evening students were apprentices studying to gain trade qualifications. Engineering and the building trades were the trades with the greatest numbers (Abbott, 2000). In the 1940s commercial subjects gained prominence and
students were involved in the areas of bookkeeping, secretarial work, accounting, banking and insurance. These students prepared for sitting Government examinations or examinations of voluntary associations such as the Chambers of Commerce (Abbott, 2000) arranged by the technical schools.

After the Second World War and following the Apprentices Act of 1948, apprentices were compelled to attend trade classes taught away from the workplace and during work time. The New Zealand Trades Certification Board was established in 1949 following the Trade Certification Act, 1949. Their work included prescribing courses, setting standards and conducting examinations. However, until the late 1950s technical colleges were predominantly secondary schools.

The growing interest in technical education and the increase in demand for a higher level of technical training along with the day release to technical colleges for apprentices meant that technical schools began to transform into tertiary, post-school environments. As with the development of technical education, the transformation to post-school environments was less by design than as a result of demand. Calls for a separate environment had been made since the 1930s but in the 1950s it was advocated that technical education should shed its secondary school responsibilities and focus on technical and trade training.

It was recognised that higher levels of skill were required, particularly within the engineering profession where theoretical studies alongside industrial experience was required (Abbott, 2000). In 1955 the New Zealand Certificate in Engineering was established as ‘middle level’ engineering courses which sat between University and Trade-level training, and further certificate courses were soon established for building, draughting, science, land surveying and quantity surveying, laboratory technicians and later, commerce. The establishment and expansion of such courses compelled the division of colleges into secondary- and tertiary-level institutions (Abbott, 2000).

The Currie Commission of 1960-1962, set up to consider the role of secondary education, supported the view that separate tertiary-level technical institutes in the major centres should be established. The concern was to meet the increasing demand to train
specialist technical workers, tradespeople and scientists for the increasingly industrial economy and to address the skill shortage. In 1960 the first technical institutes were established and between 1960 and 1965 a number of technical institutes were developed in the main centres. The institutes were formally recognised by the Education Act of 1964. In the smaller areas, technical schools continued to meet the post-secondary trade training needs until 1969 when government approval allowed for the establishment of technical institutes where there was sufficient work to occupy 10 full-time tutors. Community colleges offering traditional technical education began to be established with government approval from 1972.

During the 1980s technical institutes and community colleges were reclassified as polytechnics to reflect the wide range of courses they offered. They were restricted to the delivery of trade training courses, certificate and later diploma courses and a wide range of short courses and encouraged to respond to demand. They ran courses as long as there was enough demand from students, industry and commerce. While there was some discussion in the 1960s about a ‘binary’ system where the polytechnics could offer degrees, this was rejected. It was considered that technical institutes were there to support the demand for trade, technical and commercial training.

Technical institutes grew rapidly mainly due to the demand for their courses. The 1970s and 1980s increased the focus on tertiary level education as a vehicle to “rectify macroeconomic failings in the economy” (Abbott, 2000, p. 100). There were a number of investigations and reviews into the tertiary education system during the 1980s culminating in a report by the Hawke Working Group in 1988. Their report made a number of recommendations, including funding all institutions based on the number of full-time equivalent students and treating the funding of institutions as similarly as possible. It recommended that polytechnics become autonomous institutions with their own governing councils and with degree-granting powers. The Labour government of the time adopted many of the recommendations in the Hawke report.

By 1981 over half of all tertiary-level enrolments in New Zealand were in polytechnics. The majority of students were part time. Two Department of Education reports of the time, Learning for Life and Learning for Life II, provided the outcomes of the various
reports and outlined government decisions on tertiary education during the 1980s and 1990s. These set the direction for the overall reform of the tertiary education sector and all post-school education in New Zealand. It aimed to make tertiary education more accessible and thereby increase participation. Tuition fees for students were increased. A key characteristic of the tertiary reforms in the 1980s was to broaden participation through more competition (McLaughlin, 2003).

The large numbers of reports and investigations from the mid-1980s to early 2000s are summarised in Maureen McLaughlin’s 2003 report on Tertiary Education Policy in New Zealand. McLaughlin notes the significant change in the environment for tertiary education following the 1980s and a more competitive, market-based model. The report also notes the significant and frequent changes to policy direction and programmes that has occurred since the mid-1980s and states that the ongoing reform is a feature of the New Zealand tertiary environment.

Reforms in the 1990s moved the New Zealand tertiary environment into a more competitive market-based environment. Private contributions to education were increased as the emphasis on private returns was highlighted. Institutional autonomy to set fees were allowed. A student loan system was introduced. Polytechnics moved into many new areas of delivery. The educational ‘market’ was opened up and new private sector providers came on board. In the early 1990s, the main objectives guiding policy were increasing the student participation and limiting government costs. Private Training Establishments (PTEs) defined as establishments other than institutions that provide post-school education or vocational training, burgeoned.

Participation significantly increased, as did student fees and student loan borrowing. Government costs also increased and a Ministerial Consultative Group was set up to look at the balance between private and public contributions to education and the efficiency of providers. The group became known as the Todd Task Force after the chair Jeff Todd, Senior Partner of Price Waterhouse.

The National Qualifications Framework (NQF) established in 1990 was the introduction of unit standards as basic building blocks and qualifications that consisted of various
combinations of unit standards. This significantly altered qualifications and learning. It was designed to provide more coherence and portability, flexibility and a ‘seamless’ process that meant unit standards for a single qualification could be earned in school and continued into tertiary education or on-job training.

Supporters of the NQF suggested that the framework would also provide clarity and transparency and would break the academic/vocational divide of the examinations system (Irwin, 1997, p. 3). The system moved from a norm-referenced system to a criterion-referenced system.

Pressure to broaden the framework built over the early to mid-1990s and by 1996 it was announced that the NQF would be reviewed. It was acknowledged that some rethinking of the framework needed to occur. Pressure to include provider qualifications not consisting of unit standards including degrees and the desire of some secondary schools to retain School Certificate and Bursary and to have such results recognised on the NQF were referred to. Two Green Papers were published by the Government, one concerned with qualifications and the other looking at qualifications in the context of tertiary education.

The NQF “received its warmest welcome from industry” (Smithers, 1997, p. 105). It put industry in the driving seat in terms of qualifications. It was able to treat education institutions more as contractors instead of “as it saw, having to take what it was given” (Smithers, 1997, p. 107).

The New Zealand Qualifications Framework (NZQF) was established in 2010. This replaced the National Qualifications Framework and the New Zealand Register of Quality Assured Qualifications.

The 2000s have seen a continuation of the competitive market-based model but with an increasingly centrally steered system and increased monitoring of individual providers’ performance. Under the Education Act 1989 the Minister for Education, Skills and Employment is required to issue a tertiary education strategy with an annual statement of education priorities.
The most recent Tertiary Education Strategy document (2014-2017) refers to vocational education for the first time as part of the tertiary education landscape. The industry training system and ‘industry’ is referred to 30 times. ITOs are not referred to at all.

Recent developments in structures to encourage apprenticeships continue the up-and-down cycle of demand and the to-and-fro pull between employers and workers for apprenticeships.

**The balancing act**

Apprenticeships have performed a balancing act between skilling a workforce with the ‘right’ number of workers, managing employer reluctance to invest in training and sorting through economic and social imperatives of the day. Trade teaching in polytechnics has grown from a gap between school and work and the dichotomy of a schooling system focussed on preparing people for the professions and employers seeking a pre-trained workforce. The teaching and training in technical schools filled the gap left open by schooling that was focussed on a grammar school approach and workplaces that did not or could not provide for the high level of skills required. This is a tentative space that is the interface between secondary and tertiary education and between training and the world of work. It draws its identity from three distinct histories. These lines are the whakapapa (genealogy) of the trade education environment in New Zealand.

When surveying the history of trade and skill-related training in New Zealand a number of questions emerge. Most fundamentally we are drawn to consider what education in this arena might mean in the context of trade training. What is trade education about and who does it belong to? Who should be included in the design and delivery of trade training? What should it entail and where should it be taught? These questions have hounded the environment known as apprenticeships, trade education, and industry training since their beginnings in New Zealand.
The relationships between the design and delivery of trade training have historically been fractious. Even when they have been brought together for a short time there has remained a differentiated system. Industry Training Organisations develop standards and then contract the delivery of those standards, through a purchase model, to other tertiary education organisations. However, when industry-training organisations ‘purchase’ training what is it that they are purchasing? Is it a casual delivery of individual standards or the ability of an educator to translate training standards and resources to students and trainees in their care? Is the importance based on the number of students completing or in the quality of the training they are receiving? In seeking a high quality skills environment, the skills and professional beliefs of advanced tradespeople schooled in educational principles and processes appears currently to be overlooked.

A polar view of curriculum as either academic or non-academic has emerged from a class-based schooling system from late nineteenth and early twentieth century Britain. The system of schooling was based on the idea of higher order and lower order ‘mentalities’ (Goodson, 1992), of abstract vs concrete, intellectual vs sensual and active vs passive and became a “self-confirming circle” (p. 74) for different social groups. Schooling systems developed along these lines over approximately 80 years where the working classes were seen as better suited to the ‘lower order’ and the gentry or upper classes to the ‘higher order’. As a result vocational education has become synonymous with working class education.

Despite a less clearly delineated constructed social order in the New Zealand schooling system the idea of manual vs academic subjects and therefore manual vs academic students has still been active. Technical high schools met their demise due to the public outcry relating to what became, although was not originally envisaged as, a class-based system. Students deemed ‘academic’ were encouraged to match the experiences and evolution of their ‘academic’ teachers, and those deemed ‘non-academic’ encouraged into technical training. With the disappearance of technical schools, however, students deemed non-academic were simply encouraged out of mainstream academic schooling to find ‘something else’. In general, something else has been a trade-based manual course with teachers who tended to be trained in their discipline through a system of apprenticeship.
The current gap in the skills and training environment is a gap in recognition of skills development, education and training as a process of learning where the delivery of material is an interaction between teacher, student and content. While this is made clear in the key findings for OECD’s “Learning for Jobs” country studies (OECD, 2010), the recognition for teachers as key components in quality training and education outcomes is yet to be truly realised in the New Zealand environment.

Note: Appendix G provides a table of the key events relating to trade and technical education in New Zealand.
Chapter 4. Vocational education research and practice

This chapter is a review of the literature around vocational education research and practice. The literature review has been organized into two sections. In the first, the literature reviewed considers the shape and scope of vocational education and training (VET) and VET research in New Zealand. Literature that is based in the research area of technical and vocational educators and their practice is also reviewed. The second part of the chapter provides a more focused view of research in the area of ‘quality’ teaching and learning as it relates to vocational and technical education and how professional learning is seen and provided for.

Much New Zealand literature considers the VET practitioner environment as a site for industry- or policy-based initiatives. Most of this research seeks to enforce policy and advise practitioners and managers on how to enact policy. It seldom seeks to reveal and exemplify existing cultures and practice. Research that does focus on actual educator practices usually overlooks occupational culture and tries to reveal ways for policy to penetrate educator practice. There is little or no opportunity in such research for practice to inform policy. Educators are overwhelmingly in the position of responding to research and perceived best practice rather than informing it.

This VET workforce is viewed as one in need of enlightening, and so research designed to ‘enhance’, ‘develop’, ‘guide’, ‘assess’, ‘transform’ and ‘build capability’ is abundant at national and international levels. In particular, literature on teaching practice and literacy and numeracy, an area of intense government funding, is written with vocational educators as subjects that require ‘development’ in a reform environment. This is evident on national websites for tertiary teaching in New Zealand, for example Ako Aotearoa, and The National Centre for Literacy and Numeracy for Adults.

Research that enquires into trade educator practices and perspectives or applies a critical and socio-historical lens to the perspectives of trade educator attitudes and perceptions in terms of their roles has not been embarked on in New Zealand. In the global VET arena there is little research into the impact of vocational education reforms on the identity and
practice of vocational educators (Rauner & Maclean, 2008) and this is equally the case in New Zealand. Little work has been undertaken that focuses on the ‘life worlds’ of educators or the impact of reform on their work.

This literature review explores the work that impacts on the space and place in which vocational trade tutors undertake their work.

**Vocational Education and Training research in New Zealand**

A general de-emphasis on technical training (Ross & Bamber, 2000) over the last twenty years and the consequential lack of research is beginning to be addressed. The imperative for vocational education research in New Zealand is clear. Concerns at a national level about skill levels, particularly in the area of trades, are frequently highlighted. Similarly the lack of research in and relating to the post-school vocational learning and teaching environment is of some concern. The OECD in its 2008 report identified as a challenge the lack of a research environment in ITPs in New Zealand (OECD, 2008).

The culture for research in VET and about VET is particularly lacking as it relates to learning and teaching. The 2008 OECD report suggested that the development of a vision and appropriate framework for research in the ITP sector was a challenge for government (see OECD, 2008, p. 81) and while this has resulted in an emergence of sporadic research projects focused mostly on the industry training environments and the industry/work interface, a vision and framework for VET research is yet to be firmly established.

The VET sector in New Zealand is comparatively disparate. This is reflected in the activity and focus of VET research that has tended to be undertaken as discrete one-off projects by researchers contracted to ITOs or government departments. This research is partly industry funded and reflective of industry-based concerns and partly government funded.

Similarly, learning and teaching in VET is rarely considered outside the parameters of policy or industry. VET in New Zealand still has some distance to go in terms of its vision of teaching practitioners as an occupational group worthy of, and relevant to,
research in the area of skills-based, industry and vocational learning and not merely as instruments of policy or industry.

Overall, there is a lack of a comprehensive and encompassing research agenda that considers VET in New Zealand. Although the influence of the Performance Based Research Fund (PBRF), which more polytechnics are engaging with, is beginning to change the field, research has tended to be dominated by research activity that is industry based and policy driven. Vocational education and the work that occurs within it is not clearly defined in New Zealand and has so far failed to incorporate a critical view of the wider social and political environment.

The lead has been taken in VET research in New Zealand through the Industry Training Federation (ITF) that represents ITOs. However, this organization is industry based and funded. A New Zealand VET research forum was convened in 2011 and has been an annual event since that time. Funded and organized by the Industry Training Federation of New Zealand, research presented at the forum includes inquiries into the benefits of workplace learning, processes for on-job assessment and economic costs and benefit analysis for training. Practitioner-based research relating to government-funded initiatives, most specifically, literacy and numeracy initiatives are reported on. Similarly, the ITF hosts and partners with other organizations to convene a number of VET-related conference and forum events including the New Zealand Labour Market Forum and the New Zealand Literacy Forum.

Key areas of research for the ITF are those that link productivity and skills. As representatives of ITOs, the ITF training and education focus is naturally industry focussed. Research in this environment works in the interests of industry and operates from an industry perspective. While recent ITF forums are beginning to identify the value of research (see www.itf.org.nz/Events and Forums) and the importance of research to inform policy there is yet to be an encompassing research agenda that incorporates the idea of vocational training and education which extends beyond industry and productivity-based arenas.
Research that explores the teaching and learning environment is limited. Industry and workplace priorities dominate. In comparison with Australia’s National Centre for Vocational Education and Research (NCVER) (http://www.ncver.edu.au/aboutncver/who.html) a not-for-profit independent research body, New Zealand lacks a dedicated, independent VET research forum that promotes, builds and disseminates VET-based research, encourages debate and focuses on the learning and teaching interface. Without an independent research community, research expertise in the field is lacking and research capability in the wider VET field is limited. Despite the dearth of resources, pockets of research expertise and the recognition of the importance of vocational education and training as an educational site beyond skills for industry and economic advantage is beginning to form.

It is recognized that VET research, in New Zealand as in many other countries, is complex. As outlined earlier, there are a number of stake-holders and a series of layers which any researcher needs to negotiate. It is a research site that is particularly complicated by its interrelationships with other sectors and links to other fields. The New Zealand vocational education environment is particularly multi-layered, intricate and, at times, obscure. This is a complicated and time-consuming research site. It is possibly for this reason that much New Zealand research in the post-school VET sector is undertaken in a one-off and singularly focused fashion.

The complexity of the field is common to many countries. This area of education is part of an international research environment that includes matters relating to labour studies, post-school educational reform, occupational development, curriculum development, learning and teaching processes and evaluation, quality and assurance and economic and social reform.

Technical and Vocational Education (TVET) research is different from other forms of educational research (Rauner & Maclean, 2008) and draws on a number of different research traditions. Indeed, VET research itself has a distinct history. It is embedded in the organization and development of work as well as in the changes to work within specific disciplines. It is related to adult education and specific theories of learning and
socialization relevant to the teaching and learning of adults (Rauner & Mclean, 2008) and the workplace.

Adding to the complexity is the frequent and ongoing reform environment. Much research in the VET field focuses on neo-liberal reforms and the impact of policy on vocational education in general, for example in Canada (Fisher, Rubenson, Jones, & Shanahan, 2008), the United States (Dow, 2002; Jacobs, 2001) and the United Kingdom (Avis, 2004). This has been referred to as a ‘new vocationalism’ (Skillbeck, Connell, Lowe, & Tait, 1994).

There are national and international research institutes for TVET in Germany (established 1970), France (established 1970), the USSR (established 1963) and the US (established 1965 and another in 1977). UNESCO set up an international research unit in 2000. The internationalization of technological and economic development and the growth of transnational labour markets have intensified vocational education and have provided a drive for vocational education research (Rauner & Maclean, 2008). There is an interest in VET practitioners and their work.

In New Zealand, other than the ITF, whose research focus is outlined above, Ako Aotearoa has been involved in the funding and monitoring of research into vocational education and training particularly as it relates to VET practitioners. Research thus far has tackled a number of areas. Some of the key areas for research are: data informed teaching (Alkema, 2011), e-learning initiatives (Neal & Collier, 2006) adult literacy and numeracy (Scarrow, Franken, Tuagalu, & McGirr, M. 2012; Leach, Zepke, Haworth, & Isaacs, 2010), and assessment with a variety of projects funded thus far.

It is significant however, that within the New Zealand VET research identified here, the vocational tertiary teacher is generally not identified as different from tertiary teachers in general. Moreover, the tertiary vocational teacher as a subgroup of tertiary teachers is rarely identified or recognized. As with the VET research field, the VET practitioner has yet to be clearly named or identified as separate from their university counterparts. An
unidentified workforce community is mirrored in an unidentifiable research community and a VET sector that is largely industry-training focused that identifies trainers as subsets of industry practitioners.

The Australian model

The closest and most well established research centre for New Zealand vocational education research is the National Centre for Vocational Education Research (NCVER) in Australia which funds Australian based research in the vocational skills training and educational fields. UNESCO’s TVET Centre recognizes the association and it is state funded.

NCVER gathers, manages, analyses and evaluates research and statistics about vocational training and education at a national level. While NCVER is tightly linked to state processes and goals and is associated with research into policy-based initiatives, it is independent. The organisation gathers, manages and analyses statistics, which in New Zealand tend to be managed by the ITF representing ITOs. NCVER makes direct links to industry and employers, productivity and labour market analysis and planning. This organisation also makes wider links to the purpose and value of vocational education and makes reference to issues of social inclusion, the matter of identity of the VET system, structures of the VET system and the subject of learning and teaching in VET.

sector reference and an associated dedicated international journal VET research in this arena covers a variety of topics, and places Australian VET in a global context.

In Australia the VET teacher is an identifiable occupational group. Despite the challenges to maintaining a professional identity, teachers and tutors are named and discussed as an entity (Robertson, 2008; Wheelahan, 2010). Furthermore the terms ‘VET teacher’ or ‘TAFE teacher’ have long been in use in the Australian VET context and there is a history of VET-related research relevant to the educator (for example Chappell, 1998; Rushbrook, 1997).

Within this identifiable occupational space, the VET practitioner has an identity and is involved in debate, discussion and research. A number of important issues are debated in this space including teacher knowledge (Robertson, 2008), and issues of professionalism and status (Seddon, 2009) teacher quality (Wheelahan, 2010) and practices and innovation (Figgis, 2009; Hillier, 2009). The Vocational Educator is represented as having a purpose and position outside of the university or compulsory schooling sector and is therefore identified as holding a specific set of skills and knowledge.

Considerable work has been undertaken on the quality of teaching in VET in Australia. A large-scale project entitled “Quality teaching in VET” and funded by the Australian Government consists of a series of publications: a literature review (Wheelahan, 2010), which identified key issues in the VET teaching environment; an overview (Wheelahan & Curtin, 2010) which explored the perspectives of the many stakeholders in the VET sector; and a framework paper (Moodie & Curtin, 2010) which developed a conceptual framework for evaluating the quality of VET teaching, teaching preparation and development programmes and the experience of VET students and their outcomes. An evidence publication (Moodie & Curtin, 2010) followed which reviewed the data which informed the evaluation framework and the options paper outlined options, models and proposals for further discussion based on the research findings. This work culminated in “The quality of teaching in VET: Final report and recommendations” (Wheelahan & Moodie, 2012; see https://austcolled.com.au/announcement/study-quality-teaching-vet) which identifies a number of areas for consideration in the area of VET teaching and learning.
The final report shows recognition of the focus and demands placed on vocational education and VET practitioners in the twenty-first century. There is reference to the variety and breadth of VET provision and the differences in the provision from workplace training and assessment and full teaching responsibilities. The importance of high quality learning environments for the future of skills in Australia is the central focus.

Recommendations from Australia include induction and training for all ‘teachers’ or ‘trainers’ involved in the provision of VET. Entry-level qualifications and higher level qualifications are recommended as well as ongoing evaluation programmes. More transparency on outcomes for Registered Training Organisations, national VET awards and the instigation of strategies to support new teachers and trainers are also suggested along with continuing education qualifications. It is proposed that continuing and professional development is developed to meet nationally consistent approaches and that a new model is developed based on both discipline-based areas and generic pedagogy. A formalised national VET professional body is recommended to promote VET teaching and the formal adoption of standards for VET teaching is recommended. This is followed by recommendations to register and evaluate VET teachers. Further research is proposed to consider pedagogical content knowledge relating to the different disciplines within the VET sector. This aspect acknowledges the importance of identity and recognises that the education of novices in a particular discipline is, in the words of John Dewey, “a fostering, a nurturing, a cultivating process” (Dewey, chapter 2, 1.).

There has been no such broad-based study in New Zealand. Vocational teachers in all their forms and as a collective are not considered in recent discussions in the area of VET. The proposal to consider discipline-based pedagogical knowledge as well as generic pedagogical knowledge and skill is the basis of much of the study (see Maurice-Takerei & Jesson, 2010). In the final chapter of this thesis recommendations are outlined for an approach for the training of VET teachers in New Zealand.
VET research and the VET practitioner

Back in 1945, in his work on the history of adult education in New Zealand Thompson (1945) noted:

the fact that there is no adequate technical term for such a person: ‘tutor’ places the emphasis on the tutorial class, which can be a suitable means of instruction for only a fraction of the adult population; ‘lecturer’ preserves the atmosphere of the university; ‘teacher’, noble word that it has been, smacks too much of the school, and adults are not children; ‘organizer’ suggests the salesman with his tongue in his cheek, or the objectionable being who likes men in serried ranks; ‘adult education officer’ has a tang of the army or of a Government department; the word ‘warden’ useful for a resident officer in charge of an educational centre, has unfortunate associations with the Emergency Precautions Service (p. 291).

He draws attention to the need for attracting good people as well as the status and salary of the role. He argues that a great deal of their preparation should contain instruction in elementary psychology; that they should know something of sociology and of the principles on which community surveys are conducted and should learn something of what is done in other countries. He goes on to suggest that there should be a stimulus to further reading and investigation and their preparation should be practical – best learnt by watching someone who knows how to present lectures, organize groups, keep necessary records as well as in-service training of tutors (p. 295).

It is notable that the observations made by Thompson in 1945 are still debated and discussed in 2014 where issues of status, salary, preparation and identity continue to appear in contemporary research literature. Thompson’s suggestions regarding practical preparation, theoretical preparation and in-service professional learning are echoed in recent New Zealand literature that makes reference to vocational tutors in communities of practice (Viskovic, 2006) and models of apprenticeship (Chan, 2009).

Research into the experiences of the New Zealand VET practitioner is rare. The VET sector in New Zealand is barely recognised as a single entity existing separately from
industry and traditional academic education. It follows that the VET practitioner in New Zealand is not recognised as entirely distinguishable from an industry practitioner or a compulsory level teacher, and there is little recognition of trade vocational education practitioners in New Zealand as having specific skills necessary for the training and education of a skilled trade workforce. VET practitioners in New Zealand are seen more as a conduit for industry-based skills training than as having the knowledge, understandings and skills of an educational professional.

Much of the literature on vocational educators in New Zealand is related to the requirements to do something different. Often it is in relation to government or government-funded strategies.

There is however, one notable exception: in the work of Selena Chan. A project undertaken by Chan (2009) and entitled, “Perspectives of new trade tutors: Towards a scholarship of teaching and learning for vocational educators”, considers motivations for entry into trade-related teaching, concepts of teaching and identity formation. This work explores the transition of tradespeople into the role of teacher/educator. It considers their perspectives of their role and provides insights into the ways in which Tertiary Education Organisations (TEOs) might support the shift in identity from tradesperson/industry practitioner to tutor/training and education practitioner.

Chan’s work acknowledges identity as a key aspect in the development of vocational tutors and stands apart from other New Zealand research in this respect. Chan (2009) does consider the significance of existing practices and acknowledges the centrality of culture to existing VET teaching practices as they navigate their changing environment. The focus however, is changing VET practitioners into teaching practitioners rather than reconsidering our notion of what VET education is, or could be.

In contrast to this, VET-based research, which does consider educator practice is focused on the promotion of ‘quality learning and teaching’ environments. Due to increased and enhanced funding, Literacy and Numeracy based vocational education research has, a number of research projects focused on improving teaching practice for example, (Industry Training Federation, 2007; Mete, 2013; Whatman, Potter, & Boyd, 2011).
Vocational education and literacy and numeracy

A survey of the field of teaching and learning in vocational education cannot ignore the large amount of literature in the area of Language, Literacy and Numeracy (LLN). This is a field where much resource has been focused in recent years. In particular, the response has entailed concerns about literacy levels in the New Zealand workforce and the matter of decreased productivity for businesses employing those with lower literacy and numeracy levels.

Spurred by worrying literacy survey results and comparisons, concerns have focussed on the ability of the New Zealand workforce to compete in a global knowledge economy. Reminiscent of similar historical concerns relating to technological skill levels in industry, and the ‘general studies’ debates of the 1970s, the literacy and numeracy discourse emerging from government has engaged industry, business, trade unions and tertiary education providers. Business New Zealand, New Zealand Council of Trade Unions, Industry Training Federation and Workbase joined forces to in a 2007 publication (Industry Training Federation, 2007) “The key steps forward for workforce literacy”. This publication highlights results from the International Adult Literacy Survey (IALS) analysis that 1 in 5 New Zealanders have poor literacy levels (Walker et al., 1996, p. 6) and suggests that the “literacy issue in the adult working population” (p. 3) is a challenge, one that requires a plan for “intensive provision” in the workplace (p. 15).

‘Coffee break guides’ for trade teachers through the Ako Aotearoa website have, as a precursor, a statement about the economic benefits of higher literacy, language and numeracy skills.

In addition to coffee break guides, there are annual symposia, fora and professional development offerings as well as a number of organisations related to the field of LLN: The Literacy Alliance through Ako Aotearoa, The National Centre of Literacy and Numeracy for Adults, Literacy Aotearoa, Workbase and a number of research reports including for the Tertiary Education Commission; Literacy and numeracy professional development: Research findings (Hazelwood & Alkema, 2013), Adult Literacy and Numeracy: An Overview of the Evidence (Alkema & Rean, 2014), several for the
Ministry of Education, including ‘One size does not fit all: How five tertiary education organisations embed literacy, language and numeracy’ (Leach et al., 2010).

The Ministry of Business, Innovation and Employment have a Literacy and Numeracy portal within their website. They provide a literature review undertaken by NZCER and the Department of Labour that lists and summarises key literacy and numeracy research: “The Transfer of Literacy, Language, and Numeracy Skills from Learning Programmes into the Workplace” (Cameron, Hipkins, Lander & Whatman, 2011). Similarly, the publication “Literacy, Language and Numeracy, Connecting Research to Practice in the Tertiary Sector” by the Ministry of Education summarises nine research reports from 2009 to 2010 in the area of literacy and numeracy.

The constructed “literacy crisis” discourse (Benseman, 2003; Black & Yasukawa, 2011, p. 219) is not unique to New Zealand. Similar debates have occurred in the UK, Australia, Canada and the US as governments and policy makers seek to find ways to improve the perceived literacy proficiency of their adult and adolescent populations in readiness for workplace-related literacy demands. Research in these countries has covered a number of areas relating to literacy programmes, practitioners, assessment and learners. These include responses to literacy ‘embedding’ in educational programmes (Casey et al., 2006; Roberts et al., 2005; Smith & Gillespie, 2007), educator professional development for both literacy and vocational practitioners (Mackay, Burgoyne, Warwick, & Cipollone, 2006), ‘how to’ guides for practitioners (for example McCaffrey, Merrifield, & Millican, 2007) and literacy curriculum design and analysis (Taylor, 2009).

A ‘movement’ in New Zealand to include literacy and numeracy in levels 1-3 vocational education courses has resulted in a literacy and numeracy ‘sector’ (referred to in the National Centre of Literacy and Numeracy for Adults, July 2013 Newsletter). The literacy and numeracy field offers qualifications; for example, the NCALNE (National Certificate in Adult Literacy and Numeracy Education) in a variety of forms (‘Lite’, ‘vocational’ and ‘educator’), publishes the Literacy and Numeracy Studies Research Journal in partnership with the University of Technology in Sydney, and offers a variety of professional development activities including symposia which focus on Maori, Pasifika, Youth and professional development ‘series’ for Managers, ITPs, PTEs and
ITOs, and roadshows and literacy-based awards. Known as ‘embedding’, the literature relating to literacy and numeracy in vocational and trade education is broad and enquires into processes and procedures to ‘embed’ literacy and numeracy in trades courses through various means including the training of trade educators in literacy and numeracy-based practices, the co-teaching of trade teachers with literacy and numeracy instructors and the rewriting of instructional material and courses.

A large-scale government policy response to adult literacy and numeracy concerns in New Zealand is the introduction of national generic literacy and numeracy testing, which is linked to funding in the vocational education sector. This is a mass exercise which employs pre- and post-testing at the start and end of all levels 1-3 courses that attract funding within any programme of study within a TEO.

The assessment tool measures literacy and/or numeracy skills using content not delivered by educators. In some cases educators see a measured decline in their students, which provokes questions around their own practice and nervousness in terms of funding implications.

Not enough debate has occurred around the use of this kind of assessment to measure literacy and/or numeracy gains in adults involved in tertiary-level programmes (Anderson & Maurice-Takerei, 2011). The National Research and Development Council for literacy and numeracy, UK (NRDC) suggests that external assessment instruments are unlikely to reflect gains made in literacy since adult literacy progress is personal and individual (Brooks, Heath, & Pollard, 2005, p. 22).

In 2003 Benseman suggested that “there is much scope for good quality rigorous research that serves both practitioners and policy makers” (Benseman, 2003, p. 5). This would avoid the tendency for poorly developed policy that has little impact on educator practice except to add a layer of compliance to already stretched learning time. Unfortunately, The Literacy and Numeracy for Adults Assessment Tool is a compliance-based mechanism that shows little demonstrable benefit for students learning a trade or vocation, increases teacher workloads and is rarely used by VET practitioners. Without
much mediation the data provided by the assessment tool in the language in which it is provided are inaccessible and lacks meaning for those involved in teaching in VET.

As demonstrated above, literacy and numeracy-based research that makes reference to, or is designed for, the vocational trade practitioner is plentiful. The literature demonstrates a recognition that many trade-related students/trainees are those who may not have completed formal schooling successfully and may not have met the requisite minimum standards or qualifications outlined by NZQA. Much of the literature in this field seeks to change or improve trade teaching, is written from a literacy and numeracy perspective and neglects to consider the implications of literacy and numeracy as discipline-based and socially situated (Anderson & Maurice-Takerei, 2011).

In New Zealand and internationally the literature related to embedded LLN instruction in trade-related programmes tends to be from a literacy perspective, is conducted by those involved with adult literacy and views literacy as a generic set of skills and knowledge. Rarely are trade teaching perspectives considered except from a deficit view.

United Kingdom literacy and numeracy research often cited in New Zealand (e.g., Casey et al., 2006; Roberts et al., 2005) portrays the perspective of the literacy and numeracy practitioner. Both Casey and Roberts as key researchers in the area of embedded literacy and numeracy are members of the National Research and Development Centre for Adult Literacy and Numeracy and the Language and Literacy Group, UK.

Often referred to by literacy and numeracy practitioners, the large study conducted by Casey et al. (2006) contained a number of case studies with an emphasis on quantitative data. The project’s aim was to provide quantifiable evidence about embedded LLN provision and separate LLN provision. It sought to identify a relationship between embedded LLN provision and retention, qualifications and attitudes.

As with many studies that explore vocational education and educator practice (e.g., Figgis, 2009; Hillier, 2009) LLN-based studies are largely normative in nature. Much research in this area is from a literacy perspective and fails to address the politics of literacy instruction in vocational courses or the impact on the identity of vocational trade
education or educators. Indeed, a study that explores the responses and perspectives of trade educators to ‘imposed’ priorities has not been undertaken either internationally or domestically. Similarly it is difficult to source research that has focussed specifically on tertiary pre-trade level related education that considers the impressions, perceptions, and practices of educators as they transition in their work and identity to account for an all-encompassing shift in pedagogy.

One study to explore literacy practices in a vocational classroom was conducted by Jacqueline Darvin (2006) in a vocational High School in the United States. This is focussed on the reading practices of vocational educators and relates to this thesis in its engagement with educator practices and perceptions.

Darvin (2006) explores and observes the literacy practices and perceptions of vocational teachers and tradespeople or vocational technical teachers within vocational high school classrooms. She considers situated and workplace literacies. “On reading recipes and racing forms – The literacy practices and perceptions of vocational educators” consists of interviews with 35 vocational educators. Over a period of seven years, detailed ethnographic notes were taken. The sample included the ‘Culinary Arts, Equestrian, and Health Care’ programs in a New York City metropolitan area school. Ethnographic data was separated and coded into categories and conclusions were drawn relating to the literacy practices within a particular “community of practice (or discourse community)” (p. 11).

In addition to her ethnography, Darvin took detailed notes about the written material she found in vocational educators’ rooms. She recorded educators’ views on reading and texts. Her research indicated that vocational educators do not see themselves as ‘highly literate members of society’. This she interprets as perceptions that “have likely been cultivated from their experiences with schooling and narrow societal views about high-status and low-status texts” (p. 17). Her work largely draws on Lave and Wenger’s 1991 concept of learning as a social activity. Darvin noted that vocational educators use as many texts as academic educators, but in different ways and with different goals.
Unlike many researchers in this area, Darvin acknowledges the expertise and knowledge of the vocational educators within the study in terms of situated literacy and vocational education. This is very different from the much-cited UK studies that surround embedded Language, Literacy and Numeracy (LLN) instruction, and is in line with the suggestion by Terri Seddon (2008) that occupational identity is strengthened when specialist expertise is recognised and formally supported. Indeed, research that approaches LLN while maintaining recognition of the VET educator as the occupational expert is seldom found.

The introduction of the Adult Literacy and Numeracy Assessment Tool as a compliance measure exemplifies the tendency for poorly developed policy based initiatives to be incorporated within vocational education to ‘patch up’ perceived concerns. The introduction of this policy lacked thorough research, failed to recognise existing discipline based practices, neglected to see the ‘big picture’ in terms of teacher practices and teacher development and ignored the wider discourse on ‘literacies’ as culturally contextually based (Gee, 2001). Such a policy promotes meaningless practices within education. The assessment tool itself fails to recognise the value of existing practices within discipline based pedagogies, undermines the autonomy of discipline based or situated literacy and numeracy, ignores the concept of broader literacies and can displace knowledge built from teacher experience and expertise. Trade and technical knowledge becomes displaced and the teaching environment appropriated by literacy practitioner knowledge.

This study seeks to address a gap in research relating to trade related educator practice. The thesis investigates trade educator practice as it is. It acknowledges existing practice as that which emerges from the trade identity. In this way existing educator practice is seen as central to a theory of practice that places the educator at the centre of theory. This means that educators are described in terms of what they do, rather than what they should do.
Signature pedagogies

In an effort to re-appropriate trade teacher knowledge and endorse their specialist knowledge, a focus on the kinds of learning and teaching that occur in the trade teaching space is helpful. According to Gleeson (2005), there is a general lack of recognition of the specific pedagogies that exist within vocational education. No studies have been undertaken that inquire into specific trade educator pedagogies. There seems to be little acknowledgement of the complexity of trade teaching. Shulman (2005a) suggests that those pedagogies which “bridge theory and practice are never simple” (p. 56).

Indeed, trade educators balance theory and practice on a daily basis. Their role requires that they engage with the complexity of bridging these aspects in order that students learn. This study intends to consider trade educator techniques as specific practices unique to the particular area of trade in which it exists. It will explore the specific practices that constitute the work of trade educators by investigating practice through the lens of ‘Signature Pedagogies’.

‘Signature pedagogy’ is a term that originated with Lee Shulman of the Carnegie Foundation. It refers to teaching as the “reproduction of a specific discipline” (Jesson, 2010). Shulman (2005b) suggests that the knowledge of signature pedagogies is critical in understanding the shape and character of specific fields and can teach us about the dispositions, cultures and personalities of that field. Signature pedagogies are ‘types of teaching’, a ‘constellation of knowledge and meaning-making activities that is both the aim and the method of teaching’ (Parker, Chambers, Huber, & Phipps, 2008). Shulman (2005) highlights three aspects of instruction that those being educated in a specific field are instructed in, namely, what it is “to think, to perform and to act with integrity” (Shulman, 2005a, p. 52) within that area of work. Shulman also describes Signature Pedagogies as the aspects of a discipline that relate to habits of the mind, the head and the heart (p.52).
Shulman & Sherin (2004) suggests that teaching is the most complex of all roles. A central question is how knowledge is transferred (p. 199). It is acknowledged in this study that while trade educators’ competence is recognised in terms of their specific trade or occupation, trade teacher practice is less well understood and recognised. This lack of recognition may enhance the perception that trade educator practice is not legitimate, and add to the opinion that trade educators need to learn how to teach properly.

Signature pedagogies of the professions are ways of teaching that are accepted, acceptable and able to be described. Shulman acknowledges that they can have a problematic element and can suffer from ‘pedagogical inertia’. However the understanding, naming and describing of signature pedagogies in the professions has launched ongoing discussions and reflections relating to a Scholarship of Teaching and Learning (SoTL) which recognises and encourages scholarly work on teaching and learning across educational levels and within each discipline. They can therefore be a launching pad for the emerging pedagogies relevant to the changing workplace.

Signature pedagogies for the professions are well documented and the usefulness of the concept is established. Specific pedagogies that signify the work of medicine and law in particular have been explored and theorised. These are professions with some significant status and there is no question that particular ways of working are evident in the teaching of courses to prepare novices for the rigours of such professions.

However, trade-related education which is historically linked to the idea of apprenticeship has had little exploration in terms of the specific pedagogies involved. This is an education workforce populated by practitioners who have generally not had a strong traditional academic education and do not have strong connections to an academic world. As a result this area of education has tended to lack theory and analysis. It is possible the field has resisted or been resistant to this level of analysis due to lack of support, opportunity or inclination. A misleading but common belief that trade education is for those who have not succeeded in the academic world is part of the mistaken belief that the knowledge and skills of a trade are in some way easier than academic subjects.
There does appear to be an acknowledgement in some quarters that for VET “innovation resonates more in a discipline than as a generic concept” (Carrick Institute, 2008, p. 8). There is however, a gap in knowledge of trade-specific pedagogies and a corresponding lack of understanding that pedagogies even exist.

The idea of signature pedagogies as a way for trade teachers to consider their own learning theories within the discipline of expertise is put forward in the final chapter of this thesis.

The research work carried out in this thesis asks for the perspectives of trade teachers on the specific knowledge, skills and ethics of their trade and how these are communicated to students. These perspectives are built on to inquire into a pedagogy that is future focussed and relevant to the trades. It is acknowledged also that educator work is bound up in institutional and wider sector forces and that ‘quality’ as a notion within VET has widely acceptable norms.

**Quality teaching and vocational education**

Lists of skills and dispositions to describe good teaching litter the literature on quality education in the VET sector. It is identified that ‘quality teaching’ in this sector is important to student success (Pithers & Holland, 2002) and a number of researchers have attempted to identify the ‘sensibilities’ (Figgis, 2009), or characteristics of effective practice in VET teaching (see, for example, Hillier, 2009; Lynch, 1997; Pithers & Holland, 2002; Zepke & Leach, 2005). However, just what quality teaching consists of in a given context is not clear and does not take into account specific pedagogical environments.

In terms of effective teaching practice, often the notions of ‘quality’ in teaching in the ITP sector are reflective of the compulsory or university sector (Robertson, 2008). Such descriptions tend to describe qualities of teachers rather than specific techniques (Pithers & Holland, 2002) or practices.
With an increased emphasis on the retention and success of students within technical institutes and therefore in trade-related education, the concept of quality in teaching practice is highlighted. In a survey of technical, further education and university students in Australia, the quality of teaching was identified as one of the three vital influencing factors for student non-completion of studies and non-achievement (Taaffe & Cunningham, 2005). However, notions of quality in teaching are problematic; they are conceptualised in different ways, and include that which relates to personality characteristics, behaviours, actions and knowledge. Ingvarson and Rowe (2008) suggest that “the issues surrounding the conceptualization and evaluation of teacher quality are not well understood” (p. 5). Furthermore, in terms of trade educator perspectives, the notion of quality trade education practice may not match those of the teacher educators with whom they engage in ITPs.

Quality is a central goal in the New Zealand Tertiary Education Strategy (2014-2019) and is referred to in terms of student achievement. There is little doubt that in order to support a high-income, knowledge-based economy, and to meet the goals stated in the Tertiary Education Strategy, attention to the role and nature of teaching within the tertiary sector is vital. This is particularly so in the vocational education sector for all the reasons outlined earlier in this thesis. If ITP vocational courses are to meet the goals set out in the Tertiary Education Strategy for engagement, quality teaching and learning, and increased literacy and numeracy levels, it is necessary to consider the quality of teaching as more than compliance with ‘quality standards’. This is particularly relevant when we consider that teacher or tutor training is not compulsory, is usually undertaken once the tutor has begun teaching or, as is sometimes the case, is not undertaken at all.

The term ‘quality’ within the New Zealand vocational education sector carries a strong suggestion of compliance. Quality processes often sit within quality units and the language of quality is centred on administrative systems to ensure documented compliance. The terminology sits closely with the standards approach to training and education and suggests a ‘quality assurance’ approach that is both managerial and procedural. When discussing quality in higher education Paul Ramsden (2008) suggests that the most important quality challenge is to shift the emphasis away from a narrow procedural approach to one that is driven by innovation and enhancement. He suggests
that quality in teaching needs to be integral with the academic culture of an institution not part of a “quality industry” (p. 9).

Liz Atkins (2011) describes a similar climate in the Further Education sector in the UK—a sector which shares similar student profiles to those in the tertiary environment in levels 1-3 and trade and pre-trade courses in New Zealand:

…the detailed and prescriptive competency based structure of contemporary teacher training in the FE sector, together with wider regulation … is productive of teachers who are instrumental and conformist but who lack the knowledge to engage with the concerns for social justice which are fundamental to working in the FE sector.

(Atkins, 2011, p. 2)

In undertaking a discussion about quality and teaching, both the concept of teaching quality and the measures used to identify quality are problematic, complex and contestable (Goe, 2007; Ingvarson & Rowe, 2008). As Goe (2007) states, “Teacher quality is a complex phenomenon for which no general and absolute agreement exists concerning an appropriate and comprehensive definition” (p. 12).

Acknowledging quality teaching as a complex undertaking is vital. Robertson (2009) suggests that high quality learning environments for students in vocationally based programmes require educators to have a range of skills and knowledge in a range of areas. Similarly Moodie & Curtin (2010), in a report on the quality of teaching in VET, discusses quality teaching and ways to build a framework of design, implementation and evaluation of teaching in the VET sector.

**Teaching and quality**

The idea of quality teaching in the tertiary trade teaching arena does raise some problems when we consider trade educators. In particular, the term ‘teacher’ as mentioned earlier in this thesis is one that many trade teachers view with suspicion, a word they will often avoid when referring to their own work. Educator-based literature that makes reference to the VET practitioner considers ‘tertiary teaching’ and therefore ‘tertiary teachers’; the
term is not a comfortable fit for those involved in trade education. Tutors suggest that the word makes reference to those within the compulsory sector (Haycock & Kelly, 2009) and does not belong to their field. However, the terms ‘lecturer’, ‘instructor’, ‘trainer’, and ‘facilitator’ are equally problematic.

Matters of nomenclature are relevant. It is easy for trade teachers to distance themselves from any literature related to quality teaching in the VET sector if they perceive that the term does not make reference to them or their work. Certainly the role of trade teaching is, as suggested by Figgis (2009), not entirely straightforward. This is fluid work, and in many cases trade or VET teaching roles within ITPs, while referred to as one of ‘lecturer’ involves a wide variety of activities within and outside the institution and relates to industry-based initiatives, student recruitment, employers, products, professional bodies, school and site visits and industry liaison. The sociology of tertiary teaching is largely neglected.

It is clear from the literature that teaching in vocational education takes place in a contested environment within a tertiary institution. This is a complex environment in which to teach. Wheelahan (2010) acknowledges the difficulty with the terminology associated with those involved in the teaching, training, instruction or tuition of those in the VET sector and refers to all of those involved in such work as teachers.

Overall, the literature suggests that there are four key issues relating to tertiary teaching. Several aspects are identified as problematic for the teaching role in the tertiary and vocational environment: the way people enter the teaching occupation role in VET as industry or discipline practitioners; the professional identity of those within the VET teaching role, the value given to good teaching, and professionalism and qualifications. These are explored in the VET-based literature as key challenges and barriers to the adoption of the teacher or tutor identity.

First, the motivation for entry into the vocational teaching sector is varied. Entry into the VET teaching arena is referred to as a “sliding” in by (Gleeson, Davies, & Wheeler, 2005). Interviews by Gleeson et al. (2005) emphasise that the move into teaching can be related more to lifestyle changes or choices, rather than necessarily a desire to teach; “it
is less a career choice or pathway than an opportunity at a particular moment in time” (Gleeson et al., 2005, p. 449).

Secondly, the vocational teachers’ professional identity as teachers usually takes second place to the identity of the vocational lecturer with their former trade or vocation (Gleeson et al., 2005; Robson, Bailey, & Larkin, 2004). The silos within tertiary institutions then can act as barriers. Where vocational lecturers identify more closely with their discipline than with their institution (Brewer, 2003), there may very well be a lack of explicit alignment with the wider goals of quality teaching and the goals of the profession or vocation. Often, too, quality teaching appears to come second to the skills’ demands relating to occupational industry or trade. The tension is compounded when professional development for quality teaching is identified as an aspect of managerial, top-down requirements by institutional goals rather than by faculty initiatives. It can be seen that professional development for vocational teachers needs to be highly contextualized and relatable to the profession or discipline.

Thirdly, the status of teaching in a tertiary institution is low. Indeed, VET teaching, according to Ingvarson & Rowe (p. 9) is not a strong market for highly accomplished professionals. Davis (2003) notes that, even since the entry of teaching quality assessments in institutions there is little appreciation given to good teaching (Davis, 2003, p. 251). Teaching in a tertiary environment is often seen as a “second best pre-occupation of those unsuccessful in research” (Brewer, 2003, p. 66). Despite the work undertaken by those involved in the Scholarship of Teaching (for example Boyer, 1990; Glassick, Huber, & Maeroff, 1987), teaching is still undervalued in tertiary institutions. This causes some tensions in an ITP environment where certificate, diploma and degree courses are often taught side by side and sometimes by many of the same people.

The problem of status is heightened for trade teachers in many organisations. In ITPs those teaching at levels 1-3 in the trade environment will tend to have larger teaching loads than their diploma- or degree-teacher counterparts. There is an assumption that teaching in this area and at this level is easier. In this way a sense of a lack of status within the institution can cause discontent.
A survey in the higher education workforce undertaken by Paul Ramsden in the United Kingdom (Ramsden, 2008) showed that there is a continued tendency among tertiary level teachers “to believe that teaching is under-rewarded and unrecognized by colleges in comparison with research” (Ramsden, 2008, p. 14). Paul Ramsden makes a call for institutions to develop systems to address these perceptions. But just how the institutions could do this when structures are not in place to professionalise the role will remain an open question.

In addition to these barriers, the adoption of a professional identity as a teaching professional is hindered in New Zealand by a lack of specialised teacher training, education, minimal professional development or training and professional development that takes little account of the importance of disciplinary ways of being.

The act of teaching in the VET sector is demanding. Student, employer and organisational demands are arguably greater than within the compulsory schooling sector (Wheelahan, 2010), yet the training and support provided to teachers is relatively minimal. However, the development of formal qualifications can provide the credentials necessary for the professionalization of teaching at this level (Ingersoll & Perda, 2008) and can improve teaching practice. Researchers agree that tertiary-level teachers develop more complex conceptions about teaching, become more student focused and develop a deeper understanding of the connections between a teacher’s approach to teaching and a student approach to learning (Ginns, Kitay, & Prosser, 2008) after completing a formal qualification.

Professionalisation in the vocation and further education sector has been a topic much discussed particularly within the United Kingdom (see for example Gleeson et al., 2005; Orr, 2008; Robson et al., 2004). Professionalisation is very often linked to qualifications.

Yet, as outlined, teaching qualifications in the New Zealand vocational teaching are not compulsory. Many tutors enter teaching without the benefit of pre-service training in education (Viskovic, 2005) and many have limited knowledge relating to theories of learning and strategies for teaching. It has been argued that this lack of ‘instructional awareness’ (Weimer, 1990) leads many to teach as they were taught, “perpetuating an
adherence to traditional methods and strategies without reflecting upon the appropriateness of such methods in bringing about high quality student learning” (Ballantyne, Bain, & Packer, 1999, p. 237). Researchers have discussed the difficulty in engaging trade and vocational tutors effectively in theory related to a teaching qualification. Linda Leach (2011) acknowledges that frameworks for the learning of theory are vital and I. Robertson (2009) proposes higher-level qualifications for those involved in teaching in the vocational environment.

In England, Hodkinson (1998) suggests that educator development and professionalism are connected to the development of identity, autonomy and agency that are built through theory building, reflection, collaboration and discourse building. However, much teacher or trainer education is related to administrative processes, standards-based assessment and the delivery of material provided by others. In short, an instrumentalist approach is apparent in the development and training of VET teachers in New Zealand.

Recent studies undertaken by the Australian National Centre for Vocational Education and Research (NCVER) have explored innovative and effective teaching in the general area of vocational education (Figgis, 2009; Hillier, 2009). Such research into educator practices has been broad-based and focused on what ‘good’ vocational educators should do. It does not interrogate specific and contextualized practices or recognize the importance of culture, transition or identity. Research that does focus on educator practices tends to consider those in the compulsory schooling system. The roles of VET teachers are considered and the impact of ongoing reforms on educator roles have been considered (Chappell, 2001) as well as the changing roles of TAFE teachers (Figgis, 2009; Harris, Simons, & Clayton, 2005).

Similarly, more recent New Zealand studies which consider vocational educators have taken a broad approach and considered the nature of the tertiary educator role within the wider tertiary workforce including the university and ITP sectors (Jesson, Carpenter, McLean, Stephenson, & Airini, 2010).

Research that has been undertaken into tertiary vocational educator practices has focused mainly on university lecturers (Boyer, 1990). Lynch noted in 1997 that, “There does not
appear to be a critical mass of empirically based knowledge about effective teaching in vocational education” (p. 49). While this is beginning to change, research that considers specific pedagogical practices and identifies the centrality of cultural practices has focused on the professions, and specifically medicine and law, through the Carnegie Foundation and the Scholarship of Teaching and Learning (Boyer, 1990; Gurung, Chick, & Haynie, 2009).

**Teaching for VET**

There is a large literature base that considers notions of quality teaching in general, a smaller base of literature on quality in VET teaching and a very small amount of research into trade educator practices. The teaching role as central to the VET environment requires some unpicking in terms of how the notion of quality teaching relates. There is a need for an accepted definition of what constitutes good teaching in a vocational environment. This is particularly the case for trade-based teaching. Literature that is concerned with identifying quality teaching and teachers which relates to the vocational sector is outlined in this section.

A study on vocational teaching by Pithers and Holland (2002) outlines the highest ranking characteristics identified by students for quality in vocational education. These include characteristics that refer to behaviours towards students, currency and knowledge in their own discipline, the ability to transmit information and maintain student interest. Students also identified real world experience as important.

These characteristics link clearly with an earlier study on effective teaching in vocational teaching by Lynch (1997) and with aspects of quality teaching identified in the wider literature on quality teaching in general. Lynch, however, also finds that quality vocational teachers are positive with, and about, students and others.

More recently, NCVER (Figgis, 2009; Hillier, 2009) has provided research on innovative and effective practices in the area of vocational education and training. Jane Figgis (2009), identifies four main “sensibilities” (p. 25) within the thinking of innovative practitioners in VET and includes responsiveness, reflection and engagement with each other and local enterprises in her list. Similarly, Yvonne Hillier (2009) recognises a
series of aspects of effective practice in the VET sector (pp. 7-8) which includes close engagement in work-based learning and networks for professional practice as well as the use of new technology to facilitate learning.

These aspects, sensibilities, characteristics and identifiers of “innovation in teaching and learning in vocational education and training” (Hillier, 2009, p. 9) identify practitioners who are outward looking in terms of their subject and their teaching practice, and are focused on both industry needs and student learning. These aspects echo findings identified in a wider literature search on quality teaching in the tertiary and further education sectors.

A wider literature search on quality teaching identifies aspects commonly associated with effective and quality teaching practice. Many of these aspects link directly to those ideas identified above, especially: knowledge of the subject, knowledge of teaching, the ability to reflect and evaluate and the ability to be student focused including the ability to motivate students.

The aspect of subject knowledge is frequently emphasised within the literature on quality teaching (Beaty, 1998; Brewer & Burgess, 2005; Ellington, 2000; Green, 2006; Kane, Sandretto, & Heath, 2004; Smittle, 2003; Swain & Swan, 2009) and is also identified with staying current in the profession or discipline (Ellington, 2000).

Indeed, in the literature on effective, quality and innovative VET practice and as identified by Figgis (2009), Hillier (2009), Pithers and Holland (2002) and Lynch (1997), those who have close connections with local enterprises and have current knowledge and up-to-date technical expertise are seen as engaging in quality teaching. Certainly students quickly identify teachers who have industry expertise and up-to-date knowledge, and identify these teachers as quality teachers (Zepke, Leach, & Butler, 2009).

Similarly, the idea of pedagogical knowledge features extensively in the literature on quality teaching (Beaty, 1998; Smittle, 2003; Swan and Swain, 2009). It features less often in the literature surveyed in the area of VET. Figgis (2009) recognises good practice in VET as being associated with some key trends: Assigning authentic learning
tasks, peer learning, e-learning technologies, work-based learning, personalizing learning and involvement with staff development units that ‘go out’ to work with the vocational teacher in developing new teaching practices. This is relevant for the vocational, or trade, teacher (Lynch, 1997) in developing a pedagogy related to the trade or vocation.

Schulman (1986) identifies pedagogical content knowledge as one of the most vital aspects of successful teaching. Pedagogical content knowledge encompasses the understandings which educators have about teaching their discipline that enable them to make ideas accessible to others. Pedagogical content knowledge, as one of the key areas identified in the literature relating to quality teaching can be an important starting in the highly contextualised environments of vocational education and can be a launching pad for developing and expanding pedagogical awareness and practice.

Knowledge of the student is mentioned just as often as subject knowledge in the wider literature on effective teaching at tertiary level. This is clearly linked to responsiveness as outlined by Figgis (2009) and is identified as having an understanding or knowledge of: student prior knowledge or background in the subject, or knowing how they learn best (Borko, 2004; Boud, 1993; Brewer & Burgess, 2005; Ellington, 2000; H. Green, 2006; Kane et al., 2004; Smittle, 2003). Lynch (1997) suggests an effective practitioner within VET will be positive with students and support them to self-evaluate.

A reflective capacity in the work of quality teaching is a recurrent theme in the wider literature on quality teaching. This is formulated in different ways, as: self-assessment (Boud, 1993); engaging in on-going evaluative professional development (Smittle, 2003); using journals to address the ‘affective component’ (Stone et al., 2002); always trying to improve; and engaging in on-going monitoring and evaluation of teaching (Ellington, 2000). Similarly, effective vocational teaching is associated with changing practice based on feedback and being reflective (Figgis, 2009; Lynch, 1997).

Other aspects notable for the regularity with which they are highlighted in the wider literature on teaching quality in the compulsory and post compulsory sector are those that relate to regular monitoring of students; the providing of feedback, including assessment (Black & Wiliam, 1998; Ellington, 2000; Green, 2006; Prebble et al., 2005; Smittle,
2003; Taaffe & Cunningham, 2005), and the importance of clarity and organization in delivery (Brewer & Burgess, 2005; Ellington, 2000; Taaffe & Cunningham, 2005). In addition, further key factors in determining quality teaching which are mentioned include: teaching techniques or methods (Beaty, 1998; Ellington, 2000; Kane et al., 2004; Prebble et al., 2005; Smittle, 2003; Swain & Swan, 2009) although the specifics tended not to be developed; a collaborative environment including the notion of encouraging student participation (Chickering & Gamson, 1987; H. Green, 2006; Kane et al., 2004; Smittle, 2003; Swain & Swan, 2009), and the importance of developing relationships in the classroom (Chickering & Gamson, 1987; Kane et al., 2004). Included in this is maintaining a positive attitude towards students (Brewer & Burgess, 2005; Lynch, 1997), being committed to students and their success (Lynch, 1997) and valuing students and their perspectives (Ballantyne et al., 1999).

**Professional learning for VET**

Vocational teacher education and professional development has received little attention in the New Zealand context. Decisions relating to employment qualifications or training are left to individual organisations. The idea that if a person is a good industry practitioner they will be adequate instructors prevails from the apprenticeship model, which fails to recognise modern teaching conditions and content. Indeed, while disciplinary expertise is necessary it is not sufficient for the demands of tertiary teaching in the VET sector in New Zealand.

Despite this being such a diverse sector with a range of different disciplines, levels and sites for delivery, it is surprising that the idea of disciplinary based pedagogies does not have a stronger presence. Teaching as an embedded practice, where pedagogical content knowledge might be the aspect most often drawn on seems the least acknowledged of all areas of teaching in VET. Attempts made to define the necessary skills, qualities and knowledge for effective VET tends to neglect the area of discipline-based, content-relevant pedagogical approaches.

A 2011 publication on effective teaching and learning in Vocational Education (VE) in the United Kingdom (Farraday, Overton, & Cooper, 2011) suggests that teaching
relationships, teaching models, teaching strategies, teacher reflection are interrelated elements in effective VE teaching. Teaching context which “covers a mixture of aspects and includes the nature of the vocational subject …the qualification, the nature of the learners, their level and how they learn best” (p. 4) is included.

According to Gleeson (2005) the lack of recognition of the specific pedagogies that exist within vocational education and related to specific areas, professions or vocations is problematic. He suggests that any training and development is most effective when contextualized to the particular profession or vocation (Gleeson, 2005) and driven from a less centralized position than is the case in many tertiary institutions. Literature that explores ways in which quality teaching can be developed is the topic explored in this section.

Professional learning to develop and enhance the educational and pedagogical knowledge and skills of educators in the vocational environment is an important aspect of developing ‘quality’ learning environments. In the Key Findings for OECD’s “Learning for Jobs” country studies (OECD, 2010) teacher knowledge and teaching qualifications are identified as two of the important aspects of a quality VET system.

Since vocational tutors generally move into teaching from industry and the professions (Robson et al., 2004) and are recruited on the basis of their qualifications and experience within the subject (Beaty, 1998; Lynch, 1997), they are usually strong in the content knowledge relating to their discipline. Very often they lack knowledge of teaching, theories of learning or teaching methodologies, either generic or specific, and how to transfer their knowledge into learning opportunities for students.

The roles in which they are employed are not straightforward. Vocational educators take on many and varied roles within their educational work: they are mentors, industry trainers, safety advisors, workplace advisors, verifiers and assessors. This requires a range of skills – both pedagogical and industry based. However, the increasing tendency to view vocational educators as just deliverers of content and verifiers for industry-based assessment has led to the view that the training and professional development of vocational educators is a process for the acquisition of pre-packaged competencies
(Atkins, 2011) rather than the development of fluid and flexible knowledge sets that make possible the creation and development of responsive learning designs.

‘How to’ guides for the vocational teachers include the development of teaching models (Farraday et al., 2001). While there is a theory of vocational pedagogy discussed and developed in a European context (Lucas, Spencer, & Claxton, 2012) which promotes higher status through improved understanding of this pedagogy and the importance of teacher training, the promotion of specific teaching models and methods and attempts to capture the complexity of vocational education and training runs the risk of simplistic, competency-based exercises in standard setting.

The complexity of the work means that competency-based training and qualifications that train teachers in the processes and procedures related to the delivery of programmes are inadequate preparation. Those involved in programme development, assessment design and delivery of courses in challenging learning environments or to previously disengaged students require more substantial knowledge and skills to support their role as teacher.

Kane et al. (2004) suggest that good teaching can be learned. Thus, good teacher professional learning opportunities and teacher education can promote good outcomes for vocational education. This literature review shifts focus from the elements ascribed to quality teaching in a tertiary environment to focus on the literature that describes the professional learning that can support good teaching.

Robertson (2009) suggests that initial teacher training for vocational educators reinforces a teacher identity and is more significant in the development of professional identity than later professional development. His work makes a strong case for teacher training in the vocational education and training sector in Australia beyond the competency based certificate IV level. In New Zealand, while there is no compulsion for teaching qualifications or certifications to teach in tertiary level vocational education, the National Certificate in Adult Literacy (NCAL), a level 3 teaching qualification has become a proxy. Australian (Robertson, 2009) and United Kingdom (Atkins, 2011) concerns have yet to be formally echoed in New Zealand.
Discussion about the preparation of the vocational educator for teaching is a vital area of focus for ongoing discussion and an area greatly neglected in New Zealand. In the absence of an adequate formal national VET teaching qualification and in recognition of the necessity for new and existing tutors and educators to have some grounding in educationally based knowledge and skills, many organisations have developed their own certificates or rely on national certificates through NZQA. This lack of ‘credentialisation’ compounds the lack of status given to teaching and the lack of understanding about the importance of professional learning.

Professional development, however, can be low priority in a demanding environment with increasing teaching loads and added administrative tasks. It can be difficult to manage, and effectively difficult to quantify. Indeed, there is no overall consensus as to what constitutes effective professional development (Eaton & Carbone, 2008). With little formal initial preparation (Viskovic, 2005) and untested professional development programmes (Borko, 2004), tertiary teachers remain unprepared and often unsupported to manage the rigours of increasingly diverse classroom environments resulting from increased participation in tertiary education and the increasing diversity of the student population (Zepke & Leach, 2005). A mistrust of professional development can be the result of professional development programmes that are untested and not specific to the teaching environment within which they operate.

Part of the problem with professional development is the positioning of professional development units within organisations. Professional development centres within tertiary institutions tend to be aligned with administrative departments or service units (Macfarlane & Hughes, 2009). Much of their approach is procedural and contained within quality control systems (Carew, Lefoe, Bell, & Armour, 2008; Ramsden, 2008). Very often professional development units are seen as the ‘ally of a managerial culture’ (MacFarlane & Hughes, 2009) or part of a ‘quality industry’ (Ramsden, 2008). Some of the problems outlined by McFarlane and Hughes (2009) which stem from the centralized approach of professional development include a lack of teaching credibility, a strategic resistance for professional development and problems with funding.
We could take as a reference the ideas outlined by Thompson (1945) and the elements of instruction he identified for “the preparation of an adult educator” (1945, p. 93). We do know that the general rule that a newly employed tutor in the vocational tertiary environment undergoes a short orientation of three to five days is inadequate (Viscovic, 2005), especially since much of this orientation will be related to administrative requirements, quality processes and student management systems. Provided by the employing institution, the preparation might explore such fundamentals as assessment and lesson planning, classroom management and basic teaching techniques, but it might not.

Ongoing mentoring, coaching, or buddying is often available in tertiary institutions, combined with ongoing and voluntary, short, skills-focussed workshops. Informal conversations with colleagues may support new staff members in their teaching role, but there is no guarantee that, should collegial conversations occur, they will focus on the teaching aspect of the work as opposed to the administrative or industrial/vocational aspect (Brewer, 2003). Moreover, while departmental colleagues may be more experienced lecturers, whether they have the skills to effectively engage new colleagues concerns relating to their teaching is not clear (Brewer, 2003).

In addition, teaching, like many other professions, has changed considerably over twenty years. Bird (1991) suggests that because of the long apprenticeship experienced by new teachers as students in traditional classrooms, they are likely, without intervention, to teach in the same way as they were taught. Since many new tertiary level tutors or teachers were taught in a traditional, transmission style, this is the method they employ. There is little to counteract a teacher teaching as they were taught other than formal or informal professional learning.

Ingvarson and Rowe (2008) suggest that “effective teacher education is essential to teacher quality” (p. 5) and research indicates that good quality professional development can, under the right conditions, help teachers be more effective (Dumbrell & Smith, 2007, p. 239). Figgis (2009) suggests that development units within organizations that work with teachers to support good teaching are important aspects of providing opportunities for innovation in the area of vocational education. Therefore, identifying
professional learning opportunities which work toward an idea of quality teaching in vocational and trade-related education is vital to the development of a high quality workforce providing high quality qualifications.

MacFarlane and Hughes (2009) provide case studies exploring the effect of relocating professional development units away from the traditional support or service centres and into a discipline. This, they suggest, creates “a holistic model of academic practice and reshaping of academic identity through strengthening the links between research and teaching via professional development” (p. 5).

Figgis (2009) also supports the closer alignment of professional development organisational units with teaching staff and suggests that those involved in the most effective professional development of trade-related teachers are “donning their waders and venturing into the swampy lowlands of practice” (p. 20).

Despite the link between teacher development, teacher practice and student achievement (Invgarson & Rowe, 2008) there is little in the way of valid and reliable research that demonstrates the links (Borko, 2004; Guskey & Yoon, 1997; Hattie, 2005; Tattoo & Coupan, 2003; Timperley, Wilson, Barrar, & Fung, 2007; Wayne, Yoon, Zhu, Cronen, & Garet, 2008). While this is largely true in all areas of education it is particularly true within the post-compulsory education sector where literature that provides valid links between professional development, quality teaching and improved student achievement is sparse. The Massey University team in their research project “Academic Staff Development” (Prebble et al., 2005), stated that “there is virtually no research on any direct relationship between academic staff development and student learning outcomes” (p. 9).

Despite this, there is general agreement that effective professional development stems from effective research that has demonstrated links between professional development and student learning (Beaty, 1998; Smith & Hofer, 2002; Timperley et al., 2007). However, there is an “empirical difficulty of analyzing professional activities in education, which involve multiple actors and complex interactions” (Grangeat & Gray, 2007).
There is a very wide variety of literature on professional development for teachers in both the tertiary and compulsory education sectors. This literature covers a number of different areas. To make sense of the literature I have categorised it using the characteristics assigned by some key theorists to effective professional development. These make reference to some of the general and broad categories identified by Timperley et al. (2007), Birman, Desimone, Porter, and Garet, (2000), and refer to the multi-year study by Smith and Hofer (2002) and Beaty (1998). These sources range from compulsory-level education to community and tertiary education. The categories are: purposes, processes, and contexts associated with professional learning.

**Purposes**

The purpose of any professional development, according to much of the literature, is to enhance both knowledge of the subject and knowledge of teaching (Beaty, 1998; Smith & Gillespie, 2007; Smith & Hofer, 2002). Beaty (1998) suggests that professional development should consist of the development of professional knowledge, the development of skills and techniques, and the development of attitudes and ethical principles underpinning teaching practice.

Professional development can be an opportunity for teachers to develop pedagogical skills and content knowledge (Eaton & Carbone, 2008; Sachs, 2007), a way to help teachers meet new standards (Borko, 2004), or develop skills and techniques that are essential to teaching and how and when they are best applied (Beaty, 1998). It is also an opportunity to engage with research (Eaton & Carbone, 2008).

Certainly as Guskey (1986) suggests, staff development programmes are a systematic attempt to bring about change – change in the classroom practices of teachers, change in their beliefs and attitudes, and change in the learning outcomes of students (Guskey, 1986). It is a crucial link between policy and reform (Smith & Gillespie, 2007).

As such, teacher professional development is political and it cannot be assumed that it is uncontested (Kennedy, 2005, p. 236). Trade teachers in particular will question the
relevance of any attempt at reform and will be especially resistant if professional development attempts bring into question their own notions of what counts as good teaching.

Sachs (2007) argues that any professional development programme should incorporate a wide view of professional development. She suggests the following ‘litmus test’:

Is it useful? Does it improve my practice? Does it improve student learning? Does it extend me intellectually, personally or professionally? Does it question orthodoxies, generate new knowledge or transform practice?
(Sachs, 2007, p. 10)

Processes

The model of professional development employed in working with teachers in general does not appear to make as much difference as might be expected. Whether it is multi-session, workshop, mentor teacher or practitioner research group seems to make little difference to outcomes (Birman et al., 2000; Smith & Hofer, 2002; Timperley et al., 2007). It seems that a variety of models and approaches is necessary (Smith & Gillespie, 2007; Smith & Hofer, 2002; Timperley et al., 2007). What is important is that there is appropriate subject matter content, active learning, adequate duration, and coherence (Birman et al., 2000; Smith & Hofer, 2002; Timperley et al., 2007).

Other researchers suggest that the approaches that best activate teachers learning are those that are collaborative (Borko, 2004; Boud & Walker, 1988; Browne, Kelly, & Sargent, 2008; Grangeat & Gray, 2007; Kennedy, 2005; Smith & Hofer, 2002), involve opportunities for active learning (Beaty, 1998; Borko, 2004; Eaton & Carbone, 2008; Grangeat & Gray, 2007; Smith & Gillespie, 2007; Sprinthall & Theis-Sprinthal, 1980; Timperley et al., 2007), and contain an element of reflection (Beaty, 1998; Boud & Walker, 1988; Guskey, 1986; Kane et al., 2004; Smith & Gillespie, 2007; Timperley et al., 2007). These are discussed below:
1) Collaboration and collectivity

Jane Figgis (2009) and Yvonne Hillier (2009) identify collaboration as among the most important messages for teaching in VET. Encouraging teachers to work together is a key feature that appears in the literature on teacher professional development. It is suggested that working in conjunction with others fosters development, provides coherence, allows teachers to discuss concepts and problems and gives more opportunities to integrate what has been learnt (Birman et al., 2000; Lynch, 1997; Smith & Gillespie, 2007; Smith & Hofer, 2002; Timperley et al., 2007). Collaboration also provides very practical opportunities for teachers to share instructional content and resources (Birman et al., 2000).

Lynch (1997) interprets collaboration widely and suggests that, for vocational teachers such collaborative opportunities should extend beyond faculty bases, to collaboration with staff in education and the arts as well as in industry and in trade-related links to their vocation. Figgis’ (2009) work supports this view and she suggests that the learning gained from colleagues extends well beyond the immediate work group and often well beyond the country in which the VET teacher works. Sachs (2007) suggests that collaboration is central to change and should extend to collaboration with students.

A study undertaken in the compulsory sector by Grangeat (2007) supports the view “that most teaching knowledge emerges from work processes from within which it is immersed” (p. 499). This study of 60 teachers in complex work environments highlights the value of collective work in teacher learning. Grangeat concludes that professional development appears to result from teachers facing professional problems and overcoming them with collegial support. Teachers who work with colleagues in professional development programmes and in a contextualized way are more likely to try new approaches (Smith & Hofer, 2002), become engaged in meaningful conversations (Birman et al., 2000), and have more success in reflective activities (Boud & Walker, 1988).

Certainly, ‘discipline-specific’ approaches are the best way to improve teaching and learning’ (Carrick Institute, 2007). The opportunity to participate in a professional
community of practice (Timperley et al., 2007) from a discipline-based perspective is an important aspect of collaboration where teachers have the opportunity to talk about problems of practice (Beaty, 1998; Birman et al., 2000; Grangeat & Gray, 2007) and work on solutions relevant to their own context, and in particular to those from a trade background engaging in a different occupational culture.

Communities of practice or ‘academic work groups’ (Prebble et al., 2005; Viskovic, 2005) are seen as an effective way to develop the complex, knowledge, attitudes and skills involved in teaching. It is noted by Timperley et al. (2007) that those working together to consider student data and achievement and inform their progress as a collective, were also able to update their knowledge and skills (Timperley et al, 2007).

2) **Active Learning**

Professional development involves learning from experience (Beaty, 1998) and teacher development is enhanced through active and experiential learning (Beaty, 1998; Boud & Walker, 1988; Hatton, 1988). Kennedy (2005) agrees that teacher learning is an active process and Burbank and Kauchak (2003) suggest that professional development is viewed as an active process and engages teachers as empowered decision makers and who are involved in the regulation of their own and other learning (Timperley et al., 2007). Engaging in an active way and taking an active role in their own professional development can counteract the transmission model that many teachers adhere to (Ballantyne et al., 1999). Figgis (2009) identifies that peer learning within the Diploma of VET Practice models that teaching is ‘not telling’ and provides an action learning model through which teachers plan and learn together and experience learning as an active process.

Those teachers involved in active learning approaches reported increased knowledge and skills and were more likely to change their practice as reported in the study by Birman et al. (2000). Similarly the work of Browne et al. (2008) indicates significant reported change in practice when cycles of action learning were combined with coaching and developed through communities of practice, engaging in cycles of action and reflection, learning from experience, trial and error.
3) **Reflection**

As well as being included as an important aspect in active learning cycles, the ability to be reflective is identified singularly as an aspect of quality teaching (Boud, Keogh, & Walker, 1987; Ellington, 2000; Lynch, 1997; Smittle, 2003; Stone et al., 2002) and a vital component in any programme of professional development (Beaty, 1998; Boud et al., 1987; Guskey & Yoon, 1997; Lynch, 1997; Timperley et al., 2007). Figgis (2009) suggests that identifying assumptions that underlie performance is a key reflection and she identifies as effective practitioners those “who actively think about changing their practice” (p. 7) and are reflective.

Reflective discussion is considered an important component in the development of a professional identity (Cohen, 2010). The study undertaken by Cohen suggests that reflections and discussions with colleagues and peers is central to identity development as well as establishing norms for practice and sharing a professional identity as educators.

Providing opportunities for focused reflection is identified as an aspect of professional development that promotes change (Timperley et al., 2007) and combined with active learning promotes teacher development (Boud et al., 1987). In fact, Boud et al. suggest that all aspects of learning from experience involve reflection of some kind (Boud et al., 1987).

Transformation through reflection is a theme in the work of Liz Browne (2008). In her research on the impact and reach of a national programme of staff development for those working in further education colleges, her research found some significant impact on teacher practice through a combined approach using coaching and with a focus on reflective personal critique (Browne et al., 2008).

What is significant in the work around reflective practice is that the reflection is focused on a cycle based on student achievement and the trialling of strategies to improve achievement (Beaty, 1998; Bishop, 2008; Timperley et al., 2007). It is undertaken with feedback from colleagues or facilitators and is designed to support ongoing changes in
practice. This is relevant to the peer learning concept identified by Figgis (2009) as particularly useful in VET teaching.

**Contexts**

The leadership that surrounds and supports teacher learning is also important. Active leadership in professional development is vital (Browne et al., 2008; Smith & Gillespie, 2007; Smith & Hofer, 2002; Timperley et al., 2007). For professional development to have an impact and to be sustained, engagement by managers and structural support is needed (Browne et al., 2008; Smith & Gillespie, 2007; Smith & Hofer, 2002; Timperley et al., 2007). Smith and Gillespie (2007) suggest that management plays a key role in readying and supporting change in teachers. Change and improvement will be affected even in the best professional development if entrenched or withdrawn teachers have influence (Smith & Gillespie, 2007). This is significant when it is considered that change is the norm in many VET environments.

Management has a role in managing professional learning in terms of time and the culture that support the importance of professional learning. Meaningful change is linked to issues of time and duration (Beaty, 1998; Birman et al., 2000; Smith & Gillespie, 2007; Smith & Hofer, 2002; Sprinthall-Theis, 1987; Timperley et al., 2007). Single-session workshops should be the exception, not the norm (Smith & Gillespie, 2007, p. 236). Substantial time is needed for experienced staff to develop new skills (Sprinthall & Thies-Sprinthall, 1980) since longer-term professional development permits more time for teachers to learn about their own practice (Smith & Gillespie, 2007).

However, Timperley et al. (2007) warn that there is little evidence to support the claim that simply “providing teachers with time and resources is effective in promoting professional learning in ways that have positive outcomes for students” (p. xxv). Certainly, it is clear that a day or two of workshops will not allow for the kind of complex and high-level processing that needs to happen for teacher change to occur (Beaty, 1998). Smith and Hofer (2002) find that teacher change relates directly to the amount of time teachers spend in professional development activities (Smith & Hofer, 2002). Smith and Gillespie (2007) cite the study by Roberts, Henson, Tharp, and Moreno (2000) that showed that those teachers with low levels of self-efficacy when entering
professional development had improved self-efficacy in proportion to the length of the professional development (Smith & Gillespie, 2007, p. 230). However, while extended time is necessary for effective professional development it is not sufficient (Timperley, et al., 2007).

Supporting teacher learning and development is more complex than providing time. Hodkinson (1998) suggests that educator development and professionalism is connected to the development of identity, autonomy and agency that is built through theory building, reflection, collaboration and discourse building. The idea of ‘agency’ as an important aspect of teacher development is also highlighted by other theorists in the field including Grangeat and Gray (2007), Wilson and Deaney (2010), Goodson & Numan (2002), Vahasantanen and Etelapelto (2009) and Billett (2009).

Teacher agency as an important aspect for the development of a teacher identity and is explored in the final chapter.

The trade teacher

Since former tradespeople retain former trade and occupational identities (Gleeson, 2005) and these identities can lack explicit alignment with the wider goals of teaching within a government-funded organisation, some work is required in the area of identity transition. The assimilation of a teaching role into a professional identity is often not successful without explicit, planned and well organised professional learning. Chan (2010) outlines the value of internal and external communities of practice and offers a number of suggestions for ITPs to improve their processes for the support of new trade tutors. These include improvement to induction systems in polytechnics, a whole-organisation, learning-based approach to staff development, alignment of tutors’ own understandings of workplace-acquired learning with new understandings. A combination of formal and informal learning processes managed through a whole-organisational approach is recommended.

Viskovic (2009) suggests that informal workplace learning for tertiary teachers as a whole is an area where more support should be developed. There is acknowledgement that the uptake for formal teaching qualifications is not high in New Zealand although
informal opportunities within organisations for professional learning is “taken for granted” (p. 10). Viskovic’s summary also suggests that any formal education for tertiary teachers requires time, should connect to teachers’ own practices and should include training for team leaders and mentors.

It is clear from the literature that the development of teacher identity and teacher professionalism takes place in a contested environment within an institution. Not least are issues of time and timing with increasing workloads for many in the sector. Elevating the status of VET teachers through professional learning can be achieved through the alignment of professional development with research within an institution.

This study approaches the idea of professional learning from a capability approach with a particular focus on increasing and enhancing agency. This work accepts that trade teacher education is, in many ways, an opportunity to ‘bridge’ and bring together different ideas about learning, both disciplined-based and more generic principles, to be blended and applied within a specific and particular environment.

Accurately characterizing the work of a trade teacher within an ITP is problematic. Indeed while it is clear the traditional role of trade teachers has changed (Figgis, 2009), accurately assessing the roles and purposes of VET is not straightforward as is pointed out by Figgis, (2009, p. 23). In order to develop successful in-service and pre-service interventions for those involved in teaching and which promote “progressive pedagogy” (Hatton, 1998, p. 337), Elizabeth Hatton suggests that it is first necessary to accurately characterize teachers’ work. While this is not easy for VET or trade-based teachers, the final chapter of this thesis attempts to characterise the work of a trade teacher and builds on characterisation to outline a starting point for professional learning.

In considering a model for appropriate and effective professional learning and development within trade-related teaching, a multi-dimensional approach which acknowledges the value of occupational culture and identity is vital. Professional development that is localized and contextualized will have more of an impact than that which is generic.
There are many different conceptions about teacher learning and therefore about how to undertake effective professional development (Cochran-Smith & Lytle, 1999). It is acknowledged that teacher learning does not always transfer into teacher practice. Teacher learning is a political and contested environment. Nonetheless it is acknowledged as being vital to improved outcomes for students.

For trade-related and vocational educators, acknowledging that the field in which they were initially trained or educated forms an important part of their occupational identity (Seddon, 2009) is an important first step. If there is to be a successful shift of identity to teaching practitioner of that discipline, accompanied by the relevant skills and expertise to become effective educators, then it is necessary to acknowledge personal occupational identity as well as the wider organisational culture within which they teach. A shift to a teaching identity requires that educators become embedded in a recognisable teaching culture that is different from the culture from which they have come.

Working with trade teachers means fostering their role as educators within a known culture of vocational educators. It also means supporting their expertise in discipline-based knowledge and skills and understanding and working with them to highlight relevant pedagogical approaches. Useful professional learning for teachers in this sector should include elements of collaboration and collectivity, have an active learning approach (experiential), and provide opportunities to reflect on their work in a way which is relevant to their work and their students, relatable to their practice and cognisant of the notions of identity.

Most importantly, successful teacher professional learning and development in the VET environment will consider the restrictions and tensions inherent in the roles of the teacher or tutor and the complexities of their work.
Chapter 5. Theoretical and methodological considerations

Layers

This is a multi-method, qualitative study that draws on ethnographic methods and critical theory. The research worked over and through a number of layers (shown below): the wide layer of tertiary vocational education as a starting point, the sub-field of trade education, and finally the inner core of the study, trade tutors. The inquiry began with a wide view of a fairly general nature and moved to a more focused analysis with a very specific occupational group. The goal was to elucidate the wider field of the study and culminate in the voice of trade tutors. An inductive approach to data was applied throughout to identify matters key to trade educators and issues surrounding their work. These were refined in an ongoing way throughout the study.

Figure 7. The layers of the study

Much of the study seeks to make sense of, and find patterns and meaning within, the world and work of trade teachers or tutors and was done using a multi-disciplinary approach to data gathering and data analysis.
The study of trade and vocational education is located within a complex and multidisciplinary arena. It stands within the fields of education and work, it nudges the fields of sociology and labour studies and takes some influence from cultural studies. It is suggested that research within the field of vocational education is “transdisciplinary” (Rauner & Maclean, 2008, p. 14) and associated with “a pluralism of methods” (p. 17). This is a research space where a number of fields and disciplines converge, sometimes in a messy and disorganized way. Often analysis is in the space between the boundaries of other sectors or disciplines. Tertiary trade-related education and training is not school, it is not university, it is not strictly workplace learning or industry training, it is not exactly foundation education or employment skills, it is not adult education; however, it has elements of all of these areas.

Undertaking research in the complex and constantly changing sector of vocational and trade education in New Zealand required a multi-pronged approach. The use of different kinds of data gathering activities at different points in the inquiry provided an increased opportunity for reflection and reflexivity and provided a broad base from which to begin theorizing in the area. Those participating in the initial data-gathering activities were from a wider field than those in the more focused part of the study. Mears (2008) suggests that “research into complex issues … may be difficult to explore with a singular lens” (p. 423) and wide initial input and the use of a number of activities provided a variety of lenses with which to view the vocational education environment. Data-gathering activities over a period of time supported two purposes: a) the ongoing development of a picture of the complex vocational and trade education sector in New Zealand; and b) the aim of making meaning in terms of the work of trade educators within the sector.

Throughout the study the vocational education environment in New Zealand is considered in a general way while the perspectives of educators in the trade-related environment were delved into in a more particular way. The methods used were broadly ethnographic and included survey, interviews, focus groups and field work.
The study began with a single broad question: ‘What is Vocational Education about?’ A brief informal survey of 15 participants randomly selected from employees of a large urban polytechnic provided responses to this question and thus a background to the study.

Participants in this survey were both trade and professional employees of the polytechnic. Some worked as educators and some as administrators. Responses to this question formed a base for the inquiry.

Following the survey, two focus group discussions were undertaken. The first focus group was conducted off site. The initial dialogue in the focus group was informed by the survey results where starting discussion points raised questions such as: ‘What is the purpose of vocational education?’ and ‘What are the influences that shape vocational education?’ The focus group participants were also involved in the construction of an artefact to describe the sector. The group provided evaluative feedback on the discussion and activity. This focus group was conducted off-site with a group of self-selected
vocational educators from a range of disciplines and provided a strong background for the work.

The second focus group was undertaken in one large polytechnic. The approach using a constructed artefact was further refined based on the feedback from the first focus group. Finally, 20 one-on-one interviews with trade-related educators in two large polytechnics, one urban and one rural, were undertaken. These were recorded and transcribed. Field and site visits as well as ongoing discussions with tutors were recorded in a field notebook and were part of the data-gathering activities for this study.

A pilot study, summarized in “Nailing down an identity – the voices of six carpentry educators” (Maurice-Takerei & Jesson, 2010) trialled interview questions and approaches to be used for the full study interviews. Themes and approaches that emerged from the first focus group, the survey and the pilot study, provided a basis for ongoing work.

Interviews and fieldwork took place in two polytechnics in New Zealand. One polytechnic was a large urban institution and one was a smaller rural polytechnic. Two research sites gave a certain balance to the study, where concerns and perspectives of educators from both rural and urban environments could be investigated for similarities and differences. Both polytechnics were selected on the basis of their long traditions of trade-related education and training as well as for the similarity in the trade courses they offered.

The survey and the initial focus group were conducted in 2009. The second focus group was undertaken during 2010. The input from the survey and first focus group provided a wide and general introduction to the perspectives of those within the vocational education arena in New Zealand. Results from these activities also provided a background for the forthcoming interviews in a small pilot study undertaken with six tutors from one trade area. The pilot study was undertaken in 2010 and was in itself an opportunity to trial interview questions and to explore the interview approach.

The survey and focus group involved self-selected, participants from the vocational education environment in New Zealand. The second focus group followed suggestions
for improvement from participants in the first focus group and involved more exclusively the perspectives of trade tutors. Interviews and field work were undertaken specifically in the trade teaching arena.

The participant interviews took place over the last part of 2010 and during 2011. Twenty tutors were interviewed based on a series of interview questions compiled following the introductory activities. Ten trade tutors from each polytechnic were interviewed. Ethics approval was sought through The University of Auckland Ethics Committee and the larger of the two polytechnics. The smaller polytechnic considered that ethics approval from the University of Auckland offered adequate protection.

An email was sent to the Heads of School for Trades within each polytechnic. The email explained the parameters of the study and requested permission to work with trade tutors within the faculty and an opportunity to be introduced to the tutors. Each Head of School agreed to send out a group email introducing the study. The email provided my contact details and suggested that any tutors interested in participating make direct contact. When tutors made contact, further information about the study was emailed to them, along with the participant information sheet and a consent form. The consent form outlined a background and description of the study, the procedures that would be followed and an assurance that confidentiality would be preserved.

Interested tutors signed the form and directed any questions to me by email. They were then sent a questionnaire.

Each participant completed a questionnaire that provided demographic information and information relating to their own backgrounds and qualifications. Included in the questionnaire were a number of questions relating to perceptions of the rewards and challenges of their work as trade tutors. Participants were asked to discuss their experiences and views of trade education and training in New Zealand in general. One question invited participants to provide advice for trade educators new to the field.

All those who responded to the initial request and who subsequently completed the consent form became participants in this study. Respondents were offered the option of a
one-to-one interview or a focus group discussion. All tutors opted for a one-on-one interview.

Communicative action

The perspectives and views of vocational and trade educators are seldom heard. Traditionally, those who have influenced the shape of trade-related education and training in New Zealand have been from industry, unions, government and TEO management. It is rare for tutors to be meaningfully consulted for their input into policy matters either from within their institution in terms of institutional policies, by industry, for industry-related issues or, in a wider sense, for training and education based initiatives. When consultation is called for Industry will tend to identify trade tutors as belonging to a polytechnic environment and will consult at an administratively higher level.

Discussion and debate around issues of quality in training are often overtaken by debate and discussions around administrative issues of funding and timing of training. It is hoped that this study will bring some light to the interests of trade educators as key stakeholders in the sector. This study is derived from the belief that trade tutors/educators have a valuable contribution to make to the wider policy environment that shapes trade and vocational education.

This study makes reference to the pragmatist belief that ordinary people can develop “the necessary social institutions and standards to guide their futures” (Tashakkori & Teddlie, 2003, p. 63). The study is aspirational in its intent to capture the voice of those not generally heard in debate. The study follows a pragmatist’s paradigm where enquiry is fluid, solutions are evolving and problems can be solved through inquiry and the application of a process to consider the ‘right’ actions to take.

This approach recognises the existence of conflicting interests and acknowledges that the way forward demands acceptance of the importance of all perspectives. Habermas’ theory of “Communicative Action” (Brookfield, 2005, p. 252) is relevant to this study in terms of its goal of democratic debate to find “valid norms acceptable to all interested
parties” (Habermas, 1999, p. 9). According to Habermas, such discussion contributes to the empathetic environment as a precondition for realistic and workable solutions. Perspectives gathered and norms debated are a precursor to “consensual action” (p. ix) where those locked in debate can find agreeable solutions.

This study, as such, did not seek to provide solutions. Rather, it has aimed to highlight the ongoing debate and to provide a missing voice to the discussion. Thus it is part of the precursor process for consensual action. Communicative action as an underlying premise requires that perspectives offered by previously quiet participants in the political and institutional environment of trade and vocational education will become part of the debate.

Critical theory provided a foundation for the analysis of power interests. This acknowledges that “research can be used to either challenge or support the status quo” (Tashakkori & Teddlie, 2003, p. 139). The challenging of the status quo is a specific goal in bringing the voices of trade tutors to the fore.

The belief in communicative action as an aspirational aspect of a democratic process which can result in more just, reasonable and better-informed decision making drives this study. Research participants in this study were invited to form, develop and present their perspectives to enable more democratic debate.

**Ethnography and TIME**

As an ethnographic study, this work considers ‘lived experience’ and follows the approach outlined by Paul Willis (2000; Willis & Trondman, 2002) where data is gathered, analysed and followed by critique. As suggested by Willis, the approach brings theoretical ideas into contact with data in an ongoing way throughout the study. The application of theory and critique makes meaning of the data.

Willis suggests that the ethnography method has clear weaknesses. He discusses the method in terms of its tendency towards naturalism and its leaning, as a technique, towards being “patronising and condescending” (Willis, 1977, p. 194). In addition, he
adds that a ‘false unity’ can unwittingly emerge as the researcher attempts to answer such questions as: ‘how does it end?’ Indeed, he stresses that researchers must resist “tendencies towards empiricism…and objectification of the subject”. (p.194). However, despite its problems, Willis proposes that the ethnographic account serves to register, at least somewhere in theory, the perspectives of those involved.

This ethnographic approach is suited to ‘trying to understand’, rather than looking for truth. The ethnographic methods employed throughout this study were mostly deliberately designed to facilitate understanding rather than imposing a view. Activities were organized to generate qualitative findings from a “located aspect(s) of the human condition from the inside” (Willis & Trondman, 2002, p. 395).

A critical ethnographic approach does more than simply examine and reflect, it seeks to change the status quo. This ethnographic study emphasizes “description and explanation” (Anderson, 1998, p. 121; Thomas, 1993), but also follows a critical ethnographic goal to “describe, analyse and open to scrutiny otherwise hidden agendas, power centres, and assumptions that inhibit repress and constrain” (Thomas, 1993, pp. 2-3).

Fetterman (1998) suggests that ethnographic approaches used to describe a group or culture, engages both an art and a science. A particularly appropriate description for a study involved with trades educators whose own work can be similarly described – where the science and art of the artisan collides with the art and science of the teacher. It is an area that is creative, resourceful and innovative on a daily basis but which follows traditional procedures and established ways of doing things. In this way, the study sets out to do what it describes. Willis (2000) proposes that art is in the everyday of those engaged in their work practices.

Ethnography is described by Willis and Trondman (2002) as a family of methods involving “direct and sustained social contact” and of “richly writing up the encounter, respecting, recording, representing … the irreducibility of human experience” (p. 394).

The distinguishing characteristics of ethnography as described by Willis (2000) and outlined in detail by Willis and Trondman (2002) involve three important aspects. Firstly
the centrality of culture is to be understood; secondly, there should be a critical focus in research and writing and thirdly there is an interest in cultural policy and cultural politics where there is an aim to “circulate knowledge about different “forms of life” (p. 398). TIME (Theoretically Informed Methodological Ethnography) is described as an “evocative expression through data” (p. 399) which uses only that theory which has the maximum power for ‘illumination’. Willis and Trondman suggest that TIME can be a register of lived culture and also the directly expressed problems and questions (p. 401) relating to that culture. A key component in the application of TIME is that the theory used to illuminate the data does not overshadow or interrupt the ethnographic account but sits beneath the line. In this way, the story outlined in this thesis uses, as much as possible, the words of the participants. According to Willis and Trondman, the science is in the categorizing of those words and the art is in the placing. Much care has been taken in the writing up of this ethnography to tell a story and provide the perspectives of trade tutors, oftentimes as a collective, with a single story to tell.

Ethnography is concerned with recording the ‘nitty-gritty’ of everyday life and presenting ordinary cultural practices in ways that “produce maximum ‘illumination’ for readers” (Willis & Trondman, 2002, p. 398). It seeks to get “behind the curtain…” (Kincheloe & McLaren, 2005, p.335) by presenting, explaining and analysing the culture(s) that locate (s) the experience (Willis & Trondman, 2002, p. 395). It records how experience is located historically, socially and culturally and, shares the broad goals of bricolage, to engage in the complex domain of making sense of the world (Kincheloe & McLaren, 2005).

Data-gathering activities in this study sought to capture perspectives and experience as they are. Trade educators are considered in this study as a group with a particular culture. Interviews made particular inquiries into the everyday work of educators, their thoughts and ideas about their work and invited discussion on the influences in their work. It thus acknowledges and considers cultural practices.

The activities undertaken in this study were of a collaborative nature. They were exercises that invited discussion. There were participant accounts of their wider world of work, perspectives of their own environment and descriptions of their own intimate work.
experiences. Perceptions of the physical and political milieu in which they conduct their work were then drawn out by discussion. These discussions were boosted, developed and articulated through the use of a constructed artefact as described in the section on focus groups. Interviews were relaxed and based on a participatory approach drawing on whakawhanaungatanga (relationships) (Bishop & Glynn, 1999), were open ended and relied on participant feedback both before and after transcription. In some cases, through the analysis process, ideas were discussed with interested participants and their opinions sought. Interviews, in a number of cases, became stories where tutors discussed experiences of their work through narrative accounts based on their own life experiences. Participant observation and a researcher field notebook were also used to record authentic and informal conversations and to note educator practices and discussions while inside trade classes, in ‘smoko’ rooms and in corridors, during lunchtimes, class time and before- and after-class visits. Feedback and discussion with tutors was ongoing.

Willis’ (2000) conceptualization of ethnography as a way of understanding the world is used to guide the study. The use of “broad ethnographic techniques to generate observational data from real life, recorded with goodly inputs from the subject themselves” (Willis, 2002, p. xi) then brought “…into contact with outside concepts” to “deliver analytic and illuminating points not wholly derivable from the field but vital to conceptualizing its relationships” (p. xiii) is central both in technique and in spirit.

The ‘writing up’ of an ethnographic study is part of the ethnographic process. For Fetterman (1998), ethnography tells a “credible, rigorous, and authentic story” and “gives voice to people in their own local context” (p. 1). Thick descriptions (Fetterman, 1998; Willis, 2000) characterize an ethnographic account. This study seeks, in the writing up, to represent the life worlds of trade tutors and provide as much of their own voice as is practicable. The goal is to present an authentic account of their perceptions in the field of vocational and trade education.

Ethnographic writing for Willis (2000) is the only means of presenting the ‘rough ground’ on which agents live and move; he suggests that the language used should present the experience of participants. Indeed in the Ethnographic Imagination (2000), Willis suggests that ethnographic writing should ‘re-create’ (p.118) and be ‘continuous
with the original’ (p.118) discussion. This kind of authenticity is, for Willis, the most important aspect of writing up an authentic account.

I have represented the multi layered environment in this study by attempting to present a story with the data, and as outlined by Willis (2000) to unashamedly attempt to ‘influence the thinking and feelings of others, to make them critically reflect on representations that they have previously taken at face value’ (p. 117). This ‘write up’, whilst rigorous and authentic, still represents a subjective evaluation of what is important.

**Life worlds**

Life history research “broaden[s] the focus of teacher education and development to include the social and political the contextual and the collective” (Goodson & Choi, 2008, p. 273). According to Goodson and Choi, the “postmodern world has brought a revival in research using biographical methods” (p. 31). The authors suggest that educational researchers involved in studies of teachers’ lives “recognize that the personal life of a teacher is crucially linked to his or her teaching” (p. 31). Indeed as a point of reference within this study, this methodology contributed to the goals of the study through the illumination of educator life worlds and the unravelling of educator identity.

Other research that considers the life worlds of trade or vocational teachers is limited. Yet Goodson and Choi (2008) suggest that there is a power in the life history that can “illuminate subjective teacher experiences in social historical contexts” (Goodson & Choi, 2008, p. 5). Life-history approaches as outlined by Goodson (2001), and Chase (2005) enhance the likelihood of ‘illuminating’ the roles, perspectives and practices of trade educators. Life histories, in these interviews, focussed on personal experiences of education and training, work-based experiences and the interrelatedness of life decisions with work.

Goodson (2001) argues that this kind of research is useful for identity research (2001, p. 129). He suggests that there are a number of advantages for the approach in educational
research: It can articulate hidden or “silenced lives” (p. 133), because “public and private cannot be separated in teaching (p.133); it is an opportunity to reveal the culture as a whole; and to provide an understanding of teachers’ work within a social context (Goodson & Numan, 2002). Centrally this approach recognises “teacher’s life and work as social construction … a valuable lens for observing contemporary moves to restructure and reform” (Goodson & Numan, 2002, p. 276). This approach acknowledges that “teacher agency is a vital part of educational research” (Goodson & Numan, p. 276).

**Analysis of data**

The aim in analysing the data was to consider perspectives and views of those ‘inside’ trade education in New Zealand. It is recognized that such perspectives are formed within a particular context. Critical discourse analysis and hermeneutics focuses on the cultural, social, political and historical nature of research and “maintains that meaning making takes place within a web of social reality” (Willis, 2000. p. 342). Educator perspectives and practices are considered in relation to one another and in relation to wider social, historical, cultural and political structures.

Ethnography in general “uses reflective and reflexive processes” (Mutch, 2005, p. 157) throughout data gathering and analysis. Willis (2000) emphasises the importance of reflexivity as an ethnographic resource for understanding and respecting those involved in the study (p. 113).

As expected, the collection of approaches used to gather data resulted in a wide array of information. The complexity of the context demanded the use of the kinds of approaches that would encompass and capture the data within the complexity as well as reflect it. However, the analysis of such data created a challenge in the analysis. Perakyla (2005) warns that the analysis of a complex field with a complex data array is necessary. It is, however, difficult and brings with it a complexity of its own. A range of interpretive strategies is possible and the analytical approaches outlined here take into account the density of the data, the complexity of the field, the variety of tools utilized for the study and the use of TIME as a guiding approach.
The approach outlined in TIME is a self-reflexive process and acknowledges the social and political environment within which the study sits. Interpretation of data provides for the ‘goodly input’ of those involved, it recognizes the importance of communicative action by the suspension of judgment and it allows for the ‘to and fro’ of data and theory as described by Willis.

Willis and Trondman (2002) outline the reflexive approach as one that brings “data into forcible contact with outside concepts” and can “… deliver analytic and illuminating points not wholly derivable from the field but vital to conceptualising its relationships” (p. xiii). Willis (2002) suggests that ethnographic research works to develop answers to evolving questions (p. 114), and that a final write up, while not lessening the “literal importance of ‘record’”, can only ever be “a product of the researcher’s own sensibility” (p. 116).

While working in this study key topics were under constant and ongoing discussion, ideas were theorized, redeveloped and appropriated throughout the process of data gathering, data analysis and in the final writing of the thesis. This is the reflexive aspect of the analysis of data.

Analysis of interview transcripts themselves employed a critical approach. This approach acknowledges that meaning is socially constructed, as well as historically and culturally situated. Appropriate as an approach when exploring social change, critical discourse analysis aims to systematically explore the relations between discourse and wider social, cultural, structural relations and processes (Fairclough, 2005). Particularly relevant to this study is that the process of analysis seeks to identify and highlight imbalances in power (Locke, 2004).

Transcripts of interviews, focus groups, stories and discussions were surveyed over a number of occasions, both manually and electronically, for discursive patterns. In particular, language that related to identity and relationships and including ‘ethos’, meanings and wording (Locke, 2004) were noted. Commonalities in discourse were noted and further examined. Themes were generated and a critical approach was applied to consider the social relationships, the ‘meaning’ of discourse and the connections to
history and power structures. It was during the analysis of data that it became clear that a thorough review of the history of the sector was necessary to really understand the research space.

The analysis of data provided by interviews, discussions, focus groups, field work and coffee gatherings involved the ‘teasing out’ of ‘sensitizing concepts’ by paying attention to the ‘structures’ and ‘trends’ within the data. Analysis ran simultaneously with data collection and, in this way, took place during the course of the research. Critical discourse analysis was utilized to identify and highlight broad themes and, in accordance with the suggestions of Willis and Trondman (2002), analysis entailed the looking for ‘signposts’; using the data for meaning making, interacting with the original questions and attempting to solve the puzzle we started with.

Of particular interest during the study were the social and political world of tertiary trade and vocational education and the contested social relationships within the field. The thesis maintained a goal to highlight the inner machinations of this world of education and to illuminate the work-world of those who work within the sector as deliverers of material, trainers of students, educators and those who make decisions over and above standard-setting requirements, about what should be delivered, when and by whom.

Methods

Focus groups and the construction of meaning

Focus groups are useful for exploring ideas (Hollander, 2004) and the focus group was selected as a method because it has the ability to “create a synergistic environment resulting in a deeper, more insightful discussion” (Anderson, 1998, p. 200). They draw out experiences, opinions and beliefs relating to the world people occupy; they elicit stories (Hollander, 2004). Focus groups have major advantages for a study such as this that explores the complexities of everyday work in the contested and complex environment of vocational education. Kamberelis and Dimitriadis (2005) suggest that, as well as being a site for social interactions “akin to those that occur in everyday life” (p. 903), focus groups can consolidate collective identities, and are a “site where pedagogy,
politics and interpretive inquiry intersect and interanimate each other” (p. 903). An
important consideration in selecting the focus group method is that the environment acts
to decentre the role of the researcher, and allows for collective meaning making activated
by discussion and analysis of everyday worlds.

The focus group events involved open-ended questions designed to generate discussion
and “maximum illumination” (Willis & Trondman, 2002, p. 400). The focus group
environment was considered as a location for collaborative meaning making and an
environment for participants and researcher to work together to make meaning of the
work within the sector. The aim of the focus groups was to let people talk with minimal
interference and to encourage all participants to present their thoughts within the
parameters of the topic.

While an open-ended focus group approach can be an effective way for generating ideas
it does have shortcomings including the tendency for “groupthink” (Quible, 1998) to
emerge, or for one or two participants to override others. According to Johnson and
Turner (2003) there is also the risk of a “high dross rate” (p. 310).

Mindful of these concerns, yet keen to utilise this environment for its obvious advantages
for collective meaning making, the use of an artefact as a narrative tool was employed.
This was trialled in the first focus group and then refined for use in the full study.
Overall, this method provided a focus for discussion, kept discussion within the confines
of the topic and minimised the opportunity for dominance by one individual or group and
significantly lowered the dross rate.

The first of the two focus groups followed a guided discussion based on a series of topics
derived from earlier sector-based discussions, namely: purpose, identity, influences and
the future of vocational education. Participants in this first focus group were invited to
consider their own work and were provided with a variety of materials including
plasticine, wire, card and felt tips and were invited to construct a model which describes
their work as educators. A period of discussion and meaning making followed and
participants were asked to complete a questionnaire rating the method. Feedback from
the questionnaire was used to inform the next focus group involving just trade educators.
A more thorough outline of the use of this largely experimental method is outlined in “Constructing identity: The focus group as a building block for exploring occupational identity” (Maurice-Takerei, 2012). It borrows from an auto-ethnographic approach (Ellis, 2004) and is close to the ‘artistic approach’ (Eisner, 1981). This was an appropriate mode for this research which focuses on experience and “considers the meanings and experiences of people who function in a cultural web” (Eisner, 1981, p. 6).

The second focus group was focussed more closely on educator descriptions of their work. The preceding discussion followed similar lines, however, tutors were asked to construct a model in response to the starter ‘describe your work’. Tutors then described their model and in this way began to discuss the nature of their work. Goodson (2002) suggests that there is power in narrative such as this where people use metaphor (Willis, 2000) to develop thinking about their own work.

For trade tutors who have very often not articulated their work in a formal setting and may not have engaged in the analysis or theory of their work, discussion based on a constructed model provided a useful starting point. In many ways this became a sense-making activity, making meaning of the multi-faceted and multi-dimensional work of a trade tutor in a New Zealand polytechnic. This approach provided an opportunity to gather rich data, to ‘illuminate’ the life worlds of the trade tutor. In short, the approach helped to make sense of the fragmented, complex and often ‘boundaryless’ (Seddon, 2009) work of trade tutors by engaging with them in collaborative sense making through narrative promoted through a constructed artefact as a metaphor for cultural practices (Willis, 2002).

This method is influenced by Willis and Trondman’s ‘Manifesto for Ethnography’ (2002) and recognises Willis' assertions that “social agents’…. practices of sense-making require some digging out, some interpretation” (p. xii). The constructed artefact was seen as a “conceptual tool” (Willis & Trondman, 2002, p. 399) to cast “maximum illumination” (p. 400) on the work and perspectives of participants. It provided a meaning-making opportunity for the researcher and the participants themselves and, as such, suggests that the tutors as artists create and describe their work. Willis and
Trondman in Manifesto for Ethnography (2002) quote philosopher and mathematician Pascal (1623-1662) who said, “I cannot judge of my work, while doing it. I must do as the artist, stand at a distance; but not too far” (p. 399).

The constructed artefact then was an aesthetic representation of lived experience and a focal point for discussion. The development of a physical representation of a complex environment supported the sense-making process, utilised Eisner’s (1981) idea of “the power of form to inform” (p. 7) and increased the opportunities for participants and researcher to make sense of something that was complex and non-observable.

**Interviews and life stories**

Interviews were open-ended. Interviewees were provided with a series of open questions and discussion was invited. Interviews, on many occasions, developed into interviewee-led stories and histories as tutors discussed their own experiences as tradespeople and as tutors. Here they provided their own perspectives on their work. Many tutors openly discussed their own entry into the trade and therein guided the interviewer through their own trade/work/life story. While narrative storying was not an intentional method in this study, it developed as an interviewee-led approach in the pilot study. As such it was added to the approaches and added to the methodological and analytical bricolage theorised as that which is referred to as life history, life story, or personal narrative (Chase, 2005). The approach became more a point of reference than a deliberately employed approach. Not all interviews became life history narratives, however, those where ‘narrative storying’ became apparent provided rich and powerful data.

Life history research “broaden[s] the focus of teacher education and development to include the social and political the contextual and the collective” (Goodson & Choi, 2008, p. 273). According to Goodson and Choi, the “postmodern world has brought a revival in research using biographical methods” (p. 31). The authors suggest that educational researchers involved in studies of teachers’ lives “recognize that the personal life of a teacher is crucially linked to his or her teaching” (p. 31). Indeed, as a point of
reference within this study, this methodology contributed to the goals of the study through the illumination of educator life worlds and the unravelling of educator identity.

While the use of narrative was a ‘happy accident’ in terms of a data-gathering approach, an inductive approach to the analysis of data was a deliberate strategy. This supported management of ongoing data gathering and the drawing out of themes and key ideas throughout the study. Emergent themes, as they were identified (Anderson, 1998, p. 122) provided direction for ongoing work throughout the interview and note-taking process. All data including interview data, questionnaire results and fieldwork notes and focus group images and descriptions were surveyed. Broad themes were developed as a result. In some instances participants were approached to clarify and discuss emerging ideas. This took into account one of the key criticisms of the methodology in terms of subjectivity. Here and through a collaborative approach, subjects were involved in the formulation of key ideas and themes.

**Limitations and key assumptions**

Ethnography as a methodology has its critics. While it is identified as a suitable form for considering issues of culture (Eisenhart, 2001) it can be plagued by issues of subjectivity (Eisenhart, 2001; Gordon, 1984; Willis, 1977). Willis (1977) himself identifies concerns relating to the subjectivity of his own work as an ethnographer and concludes that, while issues remain, the methodology provides an opportunity to register the voices of those who have previously not been heard. Underlying the use of this ethnographic approach is the goal of “making a contribution towards the ongoing ‘human dialogue’, of widening the whole field of human discourse, solidarity and self-understanding” (Willis, 2000, p. 121).

Issues of reliability and validity are highlighted in concerns about interpretation using discourse analysis (Locke, 2004). There is no guarantee that reliability is possible in this approach since researchers differ in their motivations, background and areas of familiarity. Reflexive approaches to data analysis are intended to minimise researcher interference, however, it is suggested that that all knowledge is interpretive, that the ‘facts’ never speak for themselves (Kincheloe & McLaren, 2005).
In terms of validity, ethnography can be said to have a certain ‘ecological’ validity as it deals with everyday experiences. The broad themes in this work may be generalisable beyond the world within which the research is generated. Also, in a study such as this, “where data collection and analysis run simultaneously, there is internal validity” (Davidson & Tolich, 1999, p. 104) and this internal validity is based on participant repetition (Davidson & Tolich, p. 32). As suggested by Davidson and Tolich (1999) “reliability is consistency” (p. 32) and consistency is that which will lead to the generation of themes. In this work, broad themes were generated through repetition and were further discussed with participants.

Reliability in this study is accounted for within the critical and reflexive approaches and the ongoing discussion and analysis with participants. The ideas of trade-related vocational educators will be generalisable to those in related occupations but will depend entirely on the specific questions. The broad themes within this study and the responses and utterances of those involved may well be generalisable beyond related environments but this is entirely at the prerogative of the reader.

Research methods and tools used in this study were selected for their ability to provide rich data about ‘lived worlds’. The opportunity for participant feedback on data collected, ongoing discussion about findings and regular input from those involved provided some considerable scope to mitigate researcher bias.

Despite the concerns about subjectivism within critical ethnography, Willis (2000) suggests that there are four key reasons to justify the pursuit of this form. These are to help us make sense of ourselves, to bear witness, to point to injustices and to develop theoretical understandings in a rapidly changing world (Willis, 2000, pp. 119-121). It is intended that this work will contribute to “the ongoing human dialogue” (Willis, 2000, p. 120), and the “widening of the whole field of human discourse, solidarity and self-understanding” (p. 120). It is for these reasons that the selected methods and methodological approaches were appropriate for a study such as this.
It is hoped, in this way, that this research provides an insight into the ‘secrets and mysteries’ of tertiary trade education in New Zealand through the eyes and ways of those most closely involved. Perhaps this will contribute to a re-visioning of the views of how trade and trade education are provided.

In terms of generalisability, it is suggested by Eisenhart (2001) that, as long as the intentions of the researcher are focussed on recurrent, broad patterns and political commitments are clear, “recommendations about change [are] possible” (Eisenhart, 2001, p. 19).

This work makes meaning of complex work. Quite simply, this is my story of their story.
Chapter 6. Data-gathering activities

As outlined in the previous chapter, this work followed the general approach of TIME as described by Willis and Trondman (2002). The study was, in this way, multi-layered as each phase of data gathering informed the next phase of data gathering. Analysis happened in between and there was a continual ‘to and fro’ between data-gathering activities, analysis and theory building.

The process, which emerged during the course of this study, involved going backwards and forwards between data and theory, bringing raw data into contact with theoretical considerations and developing aspects as space opened up. This included discussions with participants.

An informal survey with a broad range of people involved in VET education was followed by the trial focus group. A pilot study was then undertaken with a small group of trade tutors. Following the pilot study, a questionnaire was sent to a range of trade tutors and a second focus group was undertaken. Interviews followed and these were combined with fieldwork that consisted of ongoing informal visits and discussions. Each aspect of the research informed the next aspect and data analysis occurred in an ongoing way.

As Willis and Trondman (2002) suggest, the goal of data analysis is to tease out patterns. It is “a two way stretch, a continuous process of going back and forth between induction and deduction” (p. 399). Therefore within and across each layer of the study there were ongoing refinements. The process, which emerged as part of the course of this study, involved going backwards and forwards between data and theory, and, at the suggestion of the authors, bringing raw data into contact with theoretical considerations. Ideas and aspects of theory developed new aspects and space opened up.

The results from the outer layer of the study including the informal survey and the trial focus group provided an introduction to the concerns and perspectives of the sector. In particular the informal survey provided a focus for discussion in the first focus group that
included participants from the wider VET sector. Results from both activities informed the kinds of questions to be included in the questionnaire and interviews and helped refine the overall focus group approach with trade tutors.

The informal survey as a first activity was very simple. The survey asked for responses to the single question: ‘what is vocational education about?’ The responses were varied and showed that the ideas around the purpose of vocational education were that it was either specific training or more general education. This suggested a continuum and responses were grouped thus.

What is vocational education about?
(informal survey results, 1 polytechnic, 15 respondents)

- Training for a vocation/for a workplace
- Preparation for a job
- Education tailored to a specific task
- Training in the trades

- Teaching in an applied situation
- Learning what it is to be a good ‘something’
- Education in touch with reality

- Teaching towards a vocation but with transferable skills that cover a wide range of occupations
- Personal development
- For students to better themselves
- Includes training in responsibility to others

Figure 9. What is vocational education about?

The results from this survey provided an introduction to the range of perspectives within the wider vocational education sector and was a starting point to examine the perspectives of those most closely involved as the workforce of the vocational education sector. This was the widest point of the study and provided a background for the next phases.
The first focus group: A wide view

The focus group was conducted prior to the undertaking of interviews as a basis for orientation to the field and familiarization with the sector (Maurice-Takerei, 2012). As outlined above, the informal survey provided a starting point for gaining some understanding of the perspectives on education within the wider VET environment. This first focus group was an opportunity to discuss those findings with a smaller group of vocational educators and to trial the use of a constructed artefact as a stimulus and focus for discussion. Following the focus group event, participants were asked to evaluate the method and the materials to inform the next focus group and the results of this evaluation are discussed at the end of this section.

The initial focus group included a small group of six participants from a variety of tutoring and managerial positions within vocational education, in particular, retail, hospitality, foundation studies and business. The group began by discussing the results from the informal survey and developed their own response to the question: ‘What is vocational education about?’ The results of the above-mentioned survey acted as a stimulus to conversation. Participants followed up with small group discussions and note taking. Ideas relating to the purpose, influence, identity and future of vocational education emerged through the discussion and were recorded as key themes. All participants referred to their own experiences within the field and many spoke in depth about their work, students and challenges within their role and in relation to the four areas identified.

Following the discussion, participants were provided with a range of materials from which they were asked to create a model of their understanding of vocational education. Participants responded to the instruction to develop a model of vocational education using the materials of their choice.

The precursor discussion had provided much discussion on the complexity of the sector and many of the constructed models reflected that. Materials that were provided included modelling clay, cardboard, paper, felt tips, pastels and pipe cleaners (wire). It is notable that most participants used pipe cleaners. One participant used card.
In general terms, tutors responded to the ‘big picture’ of vocational education. As Willis (2000) suggests, social agents are concerned with larger structural questions. The models that participants created were seen as metaphors for participant interpretations of the sector and the descriptions by participants of their models provided a pathway in to supporting researcher understanding of perceptions but also provided an opportunity to engage in collaborative meaning making and sense making of the vast and complex environment within which the study is situated.

Following the completion of their models, participants were asked to describe what they had constructed and how it represented vocational education. One participant created ‘a scaffold; large at the bottom, smaller in the middle and smaller at the top’. This represents the increasing specialization of vocational education as students become more skilled in a particular discipline.

Figure 10. Focus group 1 - non-linear pathways

A second model shows the ‘non-linear pathways’ in vocational education, which allows students to branch outwards and inwards according to their goals. This model shows the ‘pathways and growth that vocational education encourages where the person meets industry bringing their skills, expertise and aspirations’.
One participant used business cards to build ‘a house of cards’ showing the ‘fragile’ nature of the sector, the delicate balancing required and the sense that it could all fall apart.

Another model shows vocational education in terms of ‘all the complex bits …… joined together by a common thread which is a circle of knowledge which represents the discipline’.
In this model, the ‘web of vocational education’ is represented: A complex system of courses, standards, assessments and qualifications through which a student and their tutors must navigate.

Each model engendered discussion as participants described and explained their constructed piece. The broad themes with which we started the focus group were then further discussed and notes were taken.

The nature of the constructed models and the discussions, both precursor and follow-up, indicated at the time that tutors have a broad view of vocational education. Discussions were wide reaching and participants provided evidence for their views with details of their own context. Larger issues including the configuration of the sector, the quality of provision, questions around soft skills, improvement of choice for student and industry; delivery sites, policy, standards and student aspirations provided both an opportunity for collaborative meaning making and an opportunity for deeper insight into the perceptions and views of those in the sector.

Participants then ranked the activity and provided recommendations for conducting future similar focus groups. Participants ranked (1-5, with 5 being the highest) the
‘usefulness’ of the activity in terms of making meaning of the sector and also the ‘quality of discussion’ that arose from the description of their model. In terms of usefulness three of the participants ranked the activity at 5, two at 3 and one ranked it at 2. Five of the six participants ranked the quality of the discussion at 5 and one placed it at 2. Participants recommended focusing on just one theme for discussion and to limit the choice of materials. One participant suggested that it was difficult to choose when so many materials were provided but acknowledged that a more limited choice may limit the possibilities for some participants.

This first focus group experience and the feedback from participants provided a basis for the second focus group which focused more closely on the work of educators. In response to the feedback from the first focus group, participants were provided with just modelling clay and pipe cleaners and a singular theme began the precursor discussion, ‘What is the work of the vocational educator?’ Participants were asked to consider the question in relation to their own context. Following discussion on this idea they were asked to develop a model to describe their work as an educator in the sector in response to the question: ‘What is it you do?’

The second focus group: a trade teaching view

This second focus group brought trade tutors together with other vocational educators from a variety of disciplines, altogether including nursing, sport and physical education, computing, automotive, horticulture and motorsport. There were 10 participants in total. All participants were vocational tutors from the site of study in the large urban polytechnic. It was at this site that fieldwork had begun and ongoing discussions with tutors were in progress. Interviews were yet to take place. After some discussion around the work of vocational educators in a general sense, participants developed their own model in response to the question, ‘What is it that you do/what is your work as an educator?’ Tutors discussed this idea, clarified the task and began the task of making a model. The instructions outlined that, while this model was a response to their own work, they also had a wide scope to describe this work in any way they chose.
Conceptions of the work of a vocational educator were many and varied. It was at this point in the study that the work of educators within the vocational education sector began to make sense and to become real. I have added the captions that best capture the role that tutors ascribed themselves in the description of the constructed models. The descriptions provided here are taken from notes recorded as tutors described their model to others.

![Figure 14. Teaching as steering](image)

The model above shows ‘The progress of a motor body student over the rocky path of learning to infinite possibilities’. This is a moving model – the circle is a steering wheel moving upwards. The suggestion here is that the tutor guides the student over the bumps and shows the student how to steer the engine as he/she steers their way to future possibilities.
In this model the work of the tutor is to answer the question and ‘enlighten’ students on the inner workings of a car engine. By helping students solve the mystery of the workings of a car engine the student can move forward with their future.

The tutor, in this model, is like a coach, guiding the student over the finish line to the world beyond. The student is a novice, a bit unsure of where to go and how to cross the hurdle to the other side where there are many possibilities.
Figure 17. Teaching as weaving

This image shows the work of the tutor as one who provides the learning of a topic and helps the student to weave the individual pieces of learning together into a body of knowledge that they own and can take with them.

Figure 18. Teaching as providing directions

In the model shown in Figure 18 the tutor provides direction for the student, guiding the student from one piece of learning to the next. The tutor directs the student along a pathway and through different bits of learning to the end. At the end of the learning the student has options and can go in any direction they choose.
While the roots of this plant are underneath the soil the tutor works to support the above-ground growth to grow straight and true. He or she prunes, waters and nurtures the new growth while always being aware of the importance of a strong root structure.

In Figure 20, the role of the tutor is like the muscle on the bones of the skeleton. The muscle holds the bones together and provides strength and flexibility, just as the tutors support students to move, be flexible in their thinking and to have the strength to believe in themselves.
The work of the tutor shown in this model is to provide an anchor for learning. The tutor makes connections between bits of knowledge and provides the support for the student to take their knowledge upwards. Student and teacher are bound together in that learning until the point at which the tutor takes leave and lets the student continue the climb/growth on their own.

Commentary

More than half of the participants in the second focus group developed models as visual representations of their own teaching work that drew on visual representations of their own disciplines. Their discipline in this sense provided a metaphor for the work of teaching. Horticulture tutors used plants and trees to describe their work, mechanical tutors used cars or engines, sport and recreational tutors used parts of the body. Not all tutors made the link with their discipline and there was no correlation between this tendency and age, time teaching, gender or discipline in terms of the relationship between the model and the work. However, the more general the subject (e.g., Foundation Studies) the less discipline-linked were the models.
Interestingly, in many cases the models were not represented as static or immovable. To the contrary in many cases they were represented as moveable and in motion or were visualized as having moving parts of some kind.

In describing their models participants went into some detail. In some cases each aspect of the model represented some particular part of, at times, an intricate metaphor. Colour and shape, particular positioning, size and proportion all provided points for discussion.

The follow-up verbal descriptions and elaborations in which tutors engaged to describe their models provided insight into the notions of teaching that tutors bring to their work. For many tutors it was the first time that they had articulated their work in a formal environment. This was of benefit to the research. It provided an insight into tutor perceptions of their work and tutors reported the benefit of having an opportunity to articulate and expand their work descriptively.

The notable inclination to explicitly link notions of the teaching role to the discipline being taught and to make overt reference to the student cycle of learning was significant. In general, tutor representations of their work took into account the discipline, the students and the students’ progression. Many tutors, most especially trade-related tutors represented moveable parts within their models. These were active models, which corresponded to the notion of learners and learning as linked, moving and going somewhere.

Following the focus group events, preparation was made for a series of interviews with trade tutors. All interviewees completed a questionnaire prior to being interviewed. The questionnaire asked for both background information as well as some initial response to their work as a trade tutor in a polytechnic. The resulting data were analysed for patterns and provided further information and ideas to continue building a picture of the concerns, ideas and thinking of the trade tutor in a polytechnic. The data were entered into a spreadsheet and loaded into NVivo9 to contribute to the overall data from interviews.
The questionnaire: Context

The backgrounds and perspectives of the trade tutors

The larger, urban polytechnic enrols approximately 22,000 part-time and full-time students per year. Of these, approximately one third of students enrol in trade-related certificate-level courses. The polytechnic offers a wide range of courses from pre-certificate and foundation level courses to Master’s level degrees. The rural polytechnic included in this study enrols approximately 3500 students per year. There is a large, dedicated, trade-related campus that engages in the teaching of a large number of trades. Students at this smaller polytechnic are drawn from a wide rural population. Both polytechnics have a strong trade teaching tradition and focus. Both polytechnics have reported an increase in enrolments from younger students due to the introduction of the Youth Guarantee Scheme (from 2010), which allows young people from the age of 16 to 19 to enrol in fee-free polytechnic courses.

Of the 20 participants who completed the Consent Form and who consequently participated in the study, nine were carpentry tutors, three tutored in the automotive area, two were engineering tutors, one tutored solely in fabrication and another in both fabrication and air conditioning and there was one boat-building tutor. In addition, three participants were involved in trade-related coordination or leadership, one as a head of school and two were in co-ordination roles. A number of the tutors had combined roles including one who undertook apprenticeships coordinator tasks and one who acted as a coordinator for Youth Guarantee in trades.

Participants had worked in a variety of work streams within their trade. All tutors were trade qualified. Fifteen of the 20 had advanced trade qualifications. Many had worked for a number of years within their trade. There was a range of 12-35 years working in their trade before becoming trade tutors and an average overall of 22 years. During their time working in their trade, participants had undertaken a variety of roles including leading hand, manager, apprentice assessor, apprentice instructor, foreman, sub-foreman, and warranty advisor. Some had been self-employed tradespeople; others had worked for large or small firms.
All except one participant had undertaken some form of tertiary teacher training or education. For 12 of the 20 participants this had been at certificate level. Three had diplomas in tertiary teaching and four had higher diplomas. One tutor was a registered secondary school teacher. Within the teacher training qualification there were a number of different kinds of training from a variety of providers including: Certificate in Tertiary Teaching; Certificate in Adult Education; Certificate in Adult Teaching; Higher Certificate in Adult Education; Diploma of Tertiary Teaching; Diploma of Teaching; and National Certificate in Adult Education. Some of these were local qualifications and some were national. Some participants had also undertaken single unit standards especially in workplace assessment. Two had completed the National Certificate in Adult Literacy and Numeracy Education (NCALE) and one was in the process of completing this qualification. Other than for literacy and numeracy, none had recently undertaken formal or informal professional development relating to their roles as teachers/educators/tutors.

Only one participant had undertaken formal teacher training before commencing a teaching role in a polytechnic. This tutor was a trained secondary school technology teacher and his training was part of the compulsory training for secondary education. All other participants took part in formal tertiary teacher training or education only after having begun their teaching roles in an ITP. Overall these qualifications were undertaken part time and were to be completed as part of their employment contract. For the most part, these were at certificate level 5 and undertaken within the institution in which they were employed. Two older tutors had undertaken full-time study in teacher education outside of their institution and with tutors from other polytechnics.

In addition to their primary teaching role within their institutions, tutors, at the time of the interviews were engaged in a variety of roles within and outside of their institutions. These included programme or course leadership, industry co-ordination and liaison, school liaison, apprenticeship co-ordination, and online learning development. Some of these roles were informal and some were formal. In all cases tutors worked across a range of areas relating to their work and including liaison with industry, activities within professional or trade associations, development of courses and teaching requirements,
moderation, resource development, marketing and course promotion and responding to learning and teaching requirements. These roles took place both within and outside of their formal teaching environment. Some were at a national level and some were on a more local or regional platform.

Respondents stated a range of reasons for becoming a trade tutor. Four proposed that they wanted a career change. One respondent stated he wanted a challenge in his life and to make a difference in the lives of others and for the trade. Most interviewees outlined more than one reason that prompted a shift from the role of a tradesperson into a teaching role. Many wanted to pass on skills or knowledge; one tutor said he had “lots to share”. Tutors also suggested broader reasons for becoming a trade tutor to make a difference to students’ lives both professionally and socially, or to make a contribution to trade education. One tutor stated he had always felt like a teacher, another that he had a sense of vocation to do the work. Three tutors had enjoyed or experienced success in working with apprentices in industry and so went on to a teaching role. It was clear that, for most, the role of a tutor in a polytechnic was seen as more than a job; tutors described it as a career. One tutor suggested when asked to differentiate between time in the trade and time teaching that although he was now in a tutoring role within a polytechnic, he was still in the trade and so counted the years together. For this tutor, moving from being a tradesperson to being a trade tutor was seamless and the roles were interconnected.

In terms of how well and in what ways tutors thought their work in the trade prepared them for the work of teaching, responses were spread between discipline-based preparation and student-based experience. Overall, tutors believed they were well prepared in terms of subject knowledge and skills, and any experiences in relation to working with apprentices or managing a team of labourers or trade-based team had prepared them for working with students. Responses in relation to the preparation for teaching also acknowledged their own experiences in learning the trade and the effect of working alongside good and inspirational tradespeople. In three cases this was identified as a motivation for them to also pass on their knowledge. It was pointed out in the interviews that traditionally many tradespeople have a role in training, teaching or mentoring as part of their work within the trade and skilled tradespeople often manage a
small team. One respondent, however, suggested that nothing that he had done in his previous work as a tradesperson had prepared him for a role in teaching.

The time spent in a teaching role ranged from three years to more than 30 and the time spent as a tradesperson within industry ranged from 12 to 40 years. Some tutors included their time teaching in their overall time within the trade; they did not differentiate their formal teaching role from their trade role. This suggests that for some tutors there was a fairly seamless shift into teaching. However, most tutors identified a marked and formal change and delineated the time teaching and the time working in a trade-based role within industry.

When asked about the challenges in their work as tutors there was a variety of responses. These ranged from reference to the increasing amount of paperwork, concerns about course and training quality and ‘dumbing down’ of requirements, ITO, government and political interference, compliance requirements, funding, student numbers, student motivation and ability, open entry policies, and concerns about their own skills to manage the educational and polytechnic environment.

Tutors named the rewarding parts of their work. These were more clearly student based, “delight in seeing the students achieve [in] making something with their hands” and to “see apprentices finish and achieve their goals” and to see students “achieve a highly valued qualification”, or “seeing the students get jobs” and “advance to higher levels, like leading hand or supervisor”. In some cases, the rewards of seeing student achievement was identified as more than the attainment of skills, but also “watching people learning for self-improvement”. A common broad theme in the responses to this part of the questionnaire was the enjoyment of “watching the students develop” and “watching the growth of the students as the year progresses, not just technically but also in self-confidence”. Furthermore the “delight” in the success of their students had a broad societal reference. In some cases, reference was made to wider social benefits: “to see qualified people contribute to society”, or to see them “contribute to society and the trade” and “feeling like you are making a difference”; “seeing [my] students achieve and knowing that I have been part of that”; or “seeing young people to better futures”. One
tutor stated that he enjoyed meeting students a few years later and seeing the type of work they produce.

In terms of tutor perceptions about the importance of their role, all respondents made reference to the importance of their work based on their perceptions of their importance to students. Tutors described themselves not just as trade trainers but as “role models”, “guides” and “mentors”, as “support people”. They described their role as one that is to give “sound advice” but also to “inspire” students. Respondents saw their work as providing young people with options to learn “an honourable way to make a living and feed their families” and also to provide a base so they can be well “prepared for the next level”. While all tutors referred to students in this question, one tutor, who was also a programme leader, made reference to industry suggesting that the work of the tutor is to fill a gap required by industry.

When asked about the advice they might give to novice trade tutors just beginning in a polytechnic, it was suggested that a new tutor should leave “any prior thoughts on education at the door” and “don’t think that what worked for training apprentices in the past will work [in a polytechnic]”. Respondents proposed that, in order to be a good tutor, it was necessary to have a wide industry background and broad experiences within industry as well as a “good teaching qualification”. Tutors suggested that the life experience and prior knowledge of industry were important aspects of the teaching role. One tutor suggested that a good tutor should not just teach to the unit standards. It was acknowledged that “to do the job well is a lot of time and effort” and that tutors should “make lessons student oriented” and “show an interest in their learning”. Other qualities that respondents advised were important to the role were “open mindedness” in terms of students but also in terms of “types of teaching and learning that may work for trade students”, also honesty with students and a sense of humour. New tutors are advised to “be yourself”, “listen to students” and “be patient”.

The interviews

Interview questions followed a series of topics relating to trade education and informed by previous conversations, focus groups, questionnaires and fieldwork. Interviewees
were asked to outline their perspectives on broad topics including tutor perspectives and ideas about trades, the purpose of trade education, the role of a trade educator, the skills and knowledge at the heart of their discipline and matters related to teaching, students and industry. The tone of the interviews was relaxed, with a conversational approach; this encouraged open dialogue and allowed for ongoing perception checking between interviewer and interviewee.

Transcripts of interviews were initially informally coded and analysed for common themes and ideas. Transcripts were then loaded into the qualitative data analysis tool NVivo9 and, along with interview questionnaire results, were manually coded based on common themes and ideas as they emerged. This resulted in a large number of nodes. Coding was repeated to ensure all nodes were provided to all sources. Nodes were then grouped together based on similarity. Fifteen parent nodes and 14 child nodes emerged. Using cluster analysis, nodes were then clustered by coding similarity.

Figure 22. Nodes clustered by coding similarity
Cluster analysis is used to visualize patterns by grouping nodes that share similar coding. This was used to compare similarities and differences between the nodes and was also used to more closely consider connections and differences between the nodes. This was compared with a cluster analysis graph that clustered nodes by word similarity. Key similarities and differences between nodes were thus generated.

Some detailed analysis of each of the cluster reports was undertaken and five key areas of interest were organized to form the basis of the next chapter: The Big Picture, Being a Trade Teacher; Connections, Conflicts and My Story. These headings loosely refer to the interview questions but not entirely, since the conversational nature of the interviews led to a less formal coverage of questions with emphasis in areas that the individual interviewee was particularly keen to discuss. A co-operative check was carried out at the end of each interview by the interviewer and the interviewee to ensure that all topics had been covered.

Following coding, tutors as sources were also clustered by word similarity to identify whether there were differences between tutor responses in the urban and rural polytechnic. Interestingly, the resulting clusters indicated that tutors were loosely
clustered based more on their particular discipline or role rather than by the institution in which they worked. This is discussed in more depth in the Discussion chapter.

It is to be clarified that these categories of organization have by no means clear-cut borders. Categories crossed over and merged at times so that the task of identifying particular categories was difficult and field notes were consulted as well as cluster reports to attempt to organize and classify particular areas or nodes. The NVivo9 programme allowed for a constant ‘to and fro’ between nodes and sources, so that the process of data collation and coding was ongoing and emerging. This is the nature of the methodology which followed a narrative approach and an inductive approach to coding.

A presentation of the interview data follows. This information is organized and developed using the voice of trade tutor practitioners where practicable. All names of interviewees have been altered in the interests of anonymity.
Chapter 7. Bringing together the big picture

What is vocational or trade education about?

When asked to outline or describe their idea of vocational education most interviewees quite spontaneously identified a difference between education and training. Most of those interviewed suggested that their work was more closely related to education but had strong links to training. Bernie said that “Trade education is about the technical knowledge” but it is also about learning and understanding “what sticks the subject together”.

Some tutors suggested that their work was about both education and training. As Bernie puts it, “the why part and the do part together”. Education, they suggested is broader, wider. Bill, an automotive tutor said “it’s about theoretical understanding that can be applied to different processes”. In a similar vein, Ben suggested that “training is about processes whereas education is about a wider picture … understanding the theoretical knowledge and how it fits into the practical work”. Overall tutors agreed that training is about the preparation of people for a particular process or a specific task.

Some tutors saw their work as more closely aligned to training rather than education and these tutors tended to identify the purpose of their work as the provision of skills for industry. Grant considered that “industry need them to be productive from day one so they have to have the skills industry wants, theory comes later”. On the other hand, for the tutors who saw their work as more closely linked to the provision of skills for students rather than industry, their work was articulated as more closely aligned with education. Bill put it this way: “I spend a lot of time looking at the person than at the individual skills and I think that’s education; that’s the difference.”

Grant did not want to be identified as a teacher; he was concerned at institutional or policy based attempts to “make him into a teacher”. His suggestion that “they’re trying to get us to teach literacy and numeracy” refers to the introduction in 2011 of national compulsory literacy and numeracy assessment for all levels 1-3 courses in tertiary
institutions. This tutor protested, “That’s not my job, if I wanted to do that I’d be a teacher in a school.”

While this particular view did not prevail across all interviews, it was clear that tutors identified a difference between school teaching, industry training and trade education although this differentiation was not specifically articulated. What is notable is that this tutor had not undertaken teacher training at the time of this interview and was relatively new to the tutoring role. His views sharply contrasted with those who have had the time to consider their role and, regardless of what they called themselves, saw their role as one of “mentoring”, “supporting”, “identifying”, “caring”, or those who clearly identified as a “professional educator” or an “educator now”. Most of those interviewed could identify the difference between an educator and a trainer as being the difference between a focus solely on skills and a focus on students.

Another tutor described the literacy and numeracy tutor professional development initiatives in response to the new national requirements as beneficial to his work. Simon suggested that this professional development changed his teaching, “from teaching unit standards”; … and “pushing through standards to spending more time around the subject”. Simon considers that for those trade tutors involved in this formal professional learning, “it’s changed our thinking”. This tutor identified the structured professional development as the most useful he had received in developing his teaching skills and supporting him to develop more informed teaching practices. However, the ongoing assessment of literacy and numeracy assessment as a national requirement in trade-related courses is seen by many tutors interviewed as more of an administrative or compliance activity than an educationally based activity. It seems that, when asked, there was little connection made between assessment outcomes and ongoing teaching practices.

Bob suggested that above all, trade experience is the vital connection to teaching expertise in trade education: “Young people must be able to see your knowledge is based on experience and not from a text book”, said Bob, and this was supported by others who suggested that trade experience makes available “stories” which provide a necessary authenticity to teaching activities in trade education. Bob said that, “often I tell them how
I lost my fingernail…you know you have lots of stories and it just makes a difference when they see that you have been there and you know what you are talking about”. Or as Ray says, “you can tell them about the stuff-ups you’ve dealt with over the years”.

Overall, interviewees provided what might be called ‘big picture responses’ when asked to describe their idea of vocational education. Tutors referred to the impact on people’s lives, the economy, the labour market and the wider social impact of their work. “Trade education is more than just training. It’s about building people’s career[s]” said Angela, a programme manager. But according to Bart it is even bigger than that: it is also about “providing the well-being for a particular nation…The homes people live in, the dams for a new power supply. We need to be turning out quality tradespeople who can do those jobs”. In addition, and on a more personal level, trade education was described as being about keeping a trade “alive”, passing on knowledge, training people to go out with the appropriate “knowledge and skills to carry on working in those particular trades”, and “passing on trade knowledge to the next generation”. Bernie suggested that trade education is providing for young people “a pathway through life”; Karl said that trade education is about teaching something worthwhile, “a vocation that a person can be proud of”, so that they can “contribute something worthwhile to society”.

A number of interviewees suggested that trade education is about learning how to do a job properly and safely, or as Ivan suggested, “learning to carry out tasks in a safe and professional way and to a standard that society expects”.

A significant number of responses suggested that trade education is also about passing on to students, life skills – Bill considered that “trade skills and life skills are closely connected”, and Mike articulated that the trade is a vehicle “for the preparation of young people for life”.

Tutors suggested that not all students arrive knowing that this is the exact trade or pathway for them. Darryl said that “many are trying things out” and “a trade is a way of learning other skills – soft skills” or life skills. Bill considered that trade education “teaches young people how to be an adult” and as Simon pointed out “a lot [of students] are trying to find themselves, trying to figure out what they want” and “we help them to
be independent”. Simon continued by suggesting that sometimes we are a “bit like a guidance person in that way, we actually have to get involved in people’s lives a bit”.

Bernie outlined that vocational education is about “teaching you to work, it’s about those things we never measure”. Matthew suggested that trade education is about “preparing [students] for the practical tasks and machinery but also getting them ready for life in the workplace”. Other tutors said it is about supporting students to develop “good habits”, instilling “work skills”, teaching people “how to get along with others” and “having respect for other workers”. Roy simply suggested it is a time of preparation and Mike considered that by the time a student gets into industry from a polytechnic “they’ll have a good work ethic and we would have ironed out all the wrinkles”, “like turning up on time”.

Tutors suggested that trade education in a polytechnic provided a transition from school to work. Many tutors expressed the goal that students will be useful to industry in some way by the time they leave the polytechnic. Matthew considered that trade education is about a time of preparation for life when the “cotton wool” comes off … and we “get them ready to work”.

Simon said that, for his students, trade skills and life skills go “hand in hand” and that in many instances and depending on the particular student, teaching the skills of the trade came second to the life skills that were an integral, but often undocumented, part of the trade course. This included turning up on time properly equipped and ready to work, wearing the correct gear, maintaining good relationships with work colleagues and employers and communicating properly. He and a number of other tutors suggested that the teaching of a trade and the teaching of life skills occurred simultaneously.

Preparing students for life was a common theme. Darryl considered that the work of a trade tutor in a polytechnic was to a great extent “preparation for the workforce”, where, as he suggested, “workers are workers” and “relationships are very important”.

Interviewees considered that the development of life skills in trade courses tended to be unrecognized. Further there was a belief that trade education overall is undervalued. This
perspective arose within the interviews on a number of occasions. Interviewees drew attention to the current lack in industry of a well-trained and skilled workforce due to inattention to high quality training over the last 20 years.

A number of tutors suggested that, as a society, we are paying the price for a gap in trade training and that this skill gap in industry places pressure on any training or apprenticeship regime since finding adequately skilled people in the workforce to satisfactorily provide industry-based training and education is difficult. This puts pressure on the polytechnic environment as a largely unrecognized bastion of trade-related skills and knowledge. Tutors involved in workplace visits presented a number of examples of problematic situations in industry, where students are exposed to poor practices, unsafe environments and low-quality, industry-based experiences. Poor training, they suggest, creates an ongoing cycle of poor practices, low expectations for trainees or apprentices and the resultant poor quality workmanship that affects a whole society.

This conflict is further explored later in this chapter.

**Being a trade tutor**

Tutors identified themselves in many ways including as a tutor of their trade, as a tradesman who teaches, as a lecturer (defined by the polytechnic role). One interviewee identified himself as a teacher, but overall those interviewed tended to resile from the term ‘teacher’ and preferred to separate themselves from the compulsory education sector. Tutors used the terms ‘role model’, ‘mentor’, ‘guide’, ‘tutor’; one interviewee used the word ‘trainer’.

When describing themselves tutors invariably identified their trade as their defining first identity. Rick clarified it in this way: “if you’ve got a trade, it’s the trade that comes before anything, even where you’re from”. Bernie explained that trade teaching “…is an evolution. The trade still defines the essential being but I am certainly a professional educator”. Not all tutors identified so clearly as educators. Bernie had been teaching in a polytechnic for more than 20 years and had undergone diploma-level teacher training in
adult education. He suggested that the divide between being a trade instructor and a trade educator was “the attitude” of the tutor to his work and the students he worked with.

Nigel, caught up with me the day after our interview and said, “Hey, I’ve been thinking about this trade tutor thing and I told you I was a mechanical engineer but I’ve thought about it and I’m definitely a tutor now”. Overall, the identity of trade teacher or trade tutor is one that appears to come following consideration through discussion, contemplation and through training and education. Being employed as a trade tutor is not enough to become a trade tutor and, for the identity shift to occur, some working out is required.

One tutor identified that his involvement in teacher training provided the opportunity for him to experience the difference between training and education. Bart suggested that education was about looking at the person; his impression was that educators focus on and look after the whole person rather than focussing on the skills of the trade. Educators, he said, also consider the soft skills, “the graduate capabilities are about education” and “trainers …know about soft skills but would rather not worry about them”. Simon considered that teaching was “getting to know someone really well – relationships and supporting them [students] to become what they want to be”.

When tutors were invited to consider their work as tradespeople there was a high level of commitment and pride in relation to their trade and an enthusiasm for introducing that trade to others. Tutors were in many ways advocates of their trade; describing the importance of the work they were involved in “passing on”.

Karl tells his students that, without carpenters, “there would be no classrooms, no houses, no churches, no hotels, no schools”. Darryl explains to mechanical students the importance of accurate diagnostics in diesel engines in this way: “I say to my students they are a detective because they’ve got to see what’s wrong, they are a surgeon, they are the anaesthetist …. They’re also the nurse who mops up, cleans up and nurtures the thing … to send it back to the workforce.” According to Bob, the student needs to see that they their work is part of a bigger picture and that their work matters in the bigger scheme of things.
While it was hoped that students would end up getting an apprenticeship in the trade or go on to work in the trade there was also a certain level of acceptance by some tutors that students may not always end up working in the trade that represents the course in which they were enrolled. Some tutors saw their tutoring work in this regard as a part of the bigger pathway for that student. As Darryl said, “You do your best with them and hope that they will go out with something that they will use somewhere else”. Simon believed that his course was definitely about providing a “starting point” for students, not an end point. Darryl considered that “not everybody is good at everything” and he accepted that many times students were just working out where they wanted to be.

Bart outlined that, “We’re working with people who are not necessarily academic but who can achieve by getting the necessary input.” Bernie made it clear that learning a trade is not easy, students “need persistence” as well as tutors. Matthew said that tutors have to work at teaching a trade, teaching and learning a trade “is not like suntan lotion; it doesn’t absorb through the skin”. Nigel considered that “it takes work and commitment” on both sides and Bill said it was important not to “write students off” and that “many young people are trying to find themselves, figure out what they want”. Coming to learn a trade is “a year to grow up to gain the knowledge of how to deal with people” suggested Bill. Bernie considered that working as a trade tutor with young people was about “trying to turn them into reasonable young men”.

Indeed, when discussing the work associated with being a trade tutor it became clear that the role had many aspects. While most interviewees identified their work as primarily involving students, they also discussed various other tasks and experiences contained in the role but which sit outside the primary teaching function.

While the discussions relating to the role of a trade tutor involved a number of in-depth discussions about interactions with young people, they also included discussions about a range of activities not directly related to teaching the trade itself. Tutors employed in polytechnics, according to these interviews, were involved in additional tasks and held responsibilities involving cross-sector involvement. Some of these tasks were formal and some were more informal. Such tasks included the visiting of employers and work sites,
visiting students on site and/or working with ITOs, councils, industry and professional bodies in the development of standards and qualifications and in terms of assessment and quality assurance. Many tutors visited with potential and current employers and provided advice and information to potential employers who, as outlined by Sarah, often “don’t understand the qualifications” or “how the qualifications framework works”. Tutors also liaise with employers regarding their needs in relation to students. They may also co-ordinate apprenticeships.

As part of their everyday work tutors are also be involved in course and programme revision, resource development, student orientation programmes. They may visit schools or trade fairs. They are likely to be involved in student-recruitment activities. Tutors interviewed in this study taught on full-time courses in a trade or pre-trade course and some were also involved in part-time evening courses and short course upskilling programmes. In addition there were courses through the Ministry of Social Development, short courses or ‘taster’ courses for high school students and emerging demands for trade academy involvement with clusters of high schools.

Not all tutors were teaching in the trade they had originally trained in. However, they were all in related trades and had worked within the trade in which they now taught. Furniture makers were carpentry tutors, carpenters were boat-building tutors, coppersmiths were fabrication tutors, mechanical engineers were tutors in diesel mechanics and mechanics taught automotive technicians. In a number of instances, tutors observed that the trades in which they had trained had changed considerably, not simply through specialization but because of increased mechanization and the introduction of computer systems that carry out much of the analysis or planning. Interviewees said they had to constantly keep up with industry-related changes and alterations to trade-based codes, and suggested that time in industry would be an invaluable opportunity to enhance their teaching. A number of tutors suggested that this should be built into their work more deliberately.

One programme leader articulated the work in the trade-training sector as being very “budget focussed”. She outlined the challenges of responding to industry and community needs and of managing courses of different lengths, which run concurrently, and with the
added complexity of managing industry and ITO relationships. This programme leader suggested that much of the work relating to ITOs and industry organizations represented highly political aspects of the work. Indeed, understanding and managing the very different ways that different organizations operate and keeping current with ongoing changes in policy and focus “is a juggle” and “you’ve got to stay on top of the political stuff … because that is fundamental to whether you’re actually going to make any money”.

Being a trade tutor means juggling a number of roles. Yet despite the sometimes fractious environment and the various demands on tutors outside of their regular teaching function they clearly identified themselves as working in a trade and with those learning the trade. The following quotes show how some of the tutors described themselves and their work:

“How do I define myself? I am a professional educationalist that’s what I do now. What defines me, I’m a builder, I’m a builder first that’s interesting because that is my first identity other than being just Bernie. Being a builder was an essential part in my development.”

Ray said, “I say I’m a teacher now, but it took me a couple of years to make that change in my head because I’d been a builder for 25 years you know it’s quite a big deal, you still think of yourself as a builder when you’re first here then after a while you realise that’s not my job any more. You need to make that mind change in your head.”

He continued to outline the differences between being an on site trainer and being a tutor; “I needed to change my attitude to students, you can’t treat them like apprentices on a building site, they’re way too sensitive for that. You need to change your approach and your manner be less aggressive because the building construction industry is so aggressive so much of the communication particularly between the boss and the workers is loud and forceful and the loudest guy gets his way.”
Ron said, “I teach builders, that’s what I say, I say I teach builders. There’s that thing of how you do it properly, we teach people the proper way and we endeavour to make things better.”

Bob considered it in this way: “I would say I’m a facilitator, I work with guys that are a bit older. I always assume they bring knowledge with them to the class. As a facilitator, a guide on the side I suppose, rather than the formal approach – I say I’m a facilitator I try to encourage the learning process rather than enforcing the labour process.”

Ben saw his job as to “impart knowledge”. In his opinion, his role is to “to hand on that knowledge – good sound knowledge based on many, many years of practical application and being shown the correct way to do it myself. I’ve always built, I get leave and go and build. Six or seven years teaching and then four or five building – I get disillusioned.”

Ben classifies himself as a “building tutor”. My role is to basically just take a young student who is attending the class and I try and impart the knowledge of a job which I’ve acquired over many, many years."

Ron didn’t want to give himself “a flash name because that’s not the background I come from. So if someone asks me what I do I say I teach – I would never use the word lecturer. Teaching on site or in the classroom is the same, nothing changes – I’m always in the role of a workplace trainer.”

Karl couldn’t really say when he felt like he was becoming a teacher, “I guess I took it in my stride and enjoyed the feedback from students to say I was doing a good job, making a difference. That’s why I'm still doing it. I realise that we are here to teach and must develop teaching and learning techniques to engage our students in order for them to succeed.”
Standards and assessments

The interview questions did not include inquiries relating to unit standards or national certificates. There was however, a section in the interview which sought responses to notions of course-related curricula and the teaching of skills and knowledge. This section focused on curriculum and questioned interviewees as to the relevance of their course to industry and whether and how they would alter their courses if they could. Perspectives on unit standards and national certificates inevitably emerged.

Some tutors from across the range of trades tended to view unit standards and national certificates as a system that encouraged “mediocrity”. Bob claimed that through this system “students aren’t rewarded for their study” and “everyone is the same”. Bernie suggested that, in the current system, “[r]eal] learning doesn’t have to occur” in order to pass unit standards that lead to national certificates. He stated that the task of providing written answers to written questions does not mean the topic has been learnt and that many of the tasks are “open book”.

Tutors tended to agree that unit standards as a measurement for learning have not increased the skill level. Rather, according to Bernie they have created “disconnected”, “isolated” pieces of learning, which often do not easily or readily connect to the level at which the student is learning. Bob suggested that “in the world of unit standards competency is the lowest passable level”. Whether the completion of a national certificate is sufficient for someone to call themselves a tradesperson was debatable for some. Bill outlined that if a student is good at bookwork as an apprentice, they can gain the national certificate qualification in two and a half years, “but…I wouldn’t let them loose on my car or let them touch my brakes”.

The nature of competence was a point to note in all of the interviews. Bernie outlined that “there is a mismatch about what competent means”. “Forget once over”, he suggests, “to be good at something you have to do it over and over”. Tutors throughout the interviews echoed this sentiment and there was some discussion about the length of time it takes to be good at something, as opposed to competent.
Tutors expressed concern at how open book assessments allowed students to look for answers. Rick suggested that students “find the answers, get passed, that’s all they want to do”. This tutor recognized that the way in which a course links particular assessments and standards, and whether and how they are synchronized or concurrently run was an important part of making the learning experience cohesive. This however is not always a straightforward task, given the nature of polytechnics and academic semesters.

Bernie likened the national certificate qualification to a driver’s licence. The qualification, he insisted, is only the start – “it takes 10 years to mastery. After four years it’s only a driving licence, they’re just beginning”. Matthew agreed, “When you finish your apprenticeship is when you start learning. You are by no means proficient.” Similarly, Karl suggested that “no one is competent when they first get their licence – they become competent after they get their licence”. He suggested that, by the end of four years of learning the skills and knowledge of a particular trade, a cohesive understanding of the processes and particulars is only just beginning.

Tutors discussed the notion of time as a measure for competence in an industry setting. They tended to favour the idea of hours over unit standards. Mike said that he was concerned that “the system we have is not producing more or better qualified people”. This concern was echoed by other tutors who suggested that we are not turning out the quality and number of tradespeople that we did in the past.

Bernie discussed a mismatch in the pace and rate at which a trade is learnt and the organizational factors within an institution: “An academic model that is based in universities is at work in an ITP”, he stated. Bernie outlined that in such an environment where courses are run in semesters, “we have to have eight courses within a semester and two semesters per year”. However, when learning a trade, learning occurs in a dramatically different way: “in year one [students] start picking up a few basic skills, in year two it begins to open up a bit more and by year two and a half these guys start to fly …. and all the disconnected dots start to come together”. He outlines that such learning does not fit evenly into semester-based blocks.
In some interviews tutors discussed what they perceived as unconnected or ill placed unit standards that appear within some industry-related courses. This suggests that the restraints and pressures of a modularised learning framework with equally spaced units and credits can create a non-unified and incohesive programme of learning for trades and thus add to the frustrations of trade teaching within a standards framework. Tutors could point to specific standards that they suggested were “out of place” and which should be in year four, for example, rather than in year two. Bernie suggests that these standards are placed in year two to “even out and space out” the learning to fit into semesterised institutional and standards-based processes.

Some tutors thought that there was too much focus in some national certificates on learning about management and not enough on learning the actual skills of the trade. Bart expressed concern that some essential standards for what he perceived as essential skills were dropped in favour of others. Whilst he acknowledged that “we all have our favourites I suppose”, he was concerned that in the mechanical engineering programme a drawing standard had been withdrawn. He suggested that drawings and sketches were the written language of engineering and “if you can draw something you understand how to read it and they’ve taken out drawing, it’s a real shame”. The questions followed as to how well considered the collection of standards and units were that make up a national
certificate, the depth of the trade experience of those making the decisions as to what is and is not included and “whose favourites” became essential learning.

There was some concern about how assessments were written. There was an acknowledgement that there is some considerable skill required to write assessment activities and questions and that these skills are not always demonstrated in the materials that come from ITOs. In addition to the skill of writing assessments, one requires some expertise in the discipline for which the assessment is being written. Darryl expressed concern over the lack of qualifications and the lack of trade knowledge of resource people within the organizations that generate the materials distributed for teaching and assessment. There was a suggestion that materials and assessment writers were administrators and had moved to their standard-setting role without any disciplinary qualifications or background.

In terms of unit standards and assessments Bob suggested that the electrical model, which retains an examination at the end of the national qualification, has a benefit for increased trade skill. He suggests that such an examination “sets a benchmark, particularly of technical competence [and all trainees must pass the examination] before they can call themselves a tradesman”. Furthermore, tutors in all trades identified that an increase in regulations and licensing was very important for their trade. They saw the enhanced measures as an important way to benchmark, enhance quality and increase safety.

The goals of increasing trade quality and safety were common themes in the interviews. Current and recent moves to regulate some areas of industry were welcomed. Karl considered that “it’s long overdue”. Similarly, the requirement for tradespeople “to upskill” has been part of the Australian trade landscape for 20 or 30 years, according to Karl, and any measures in New Zealand to increase competence and bring us more in line with Australian industry should be viewed positively.

Overall tutors interviewed were keen to see trade standards raised and maintained through legislative compliance methods and increased monitoring. Karl suggested: “We can’t go back to the mid to late 90s where anybody could pick up a hammer and nails and
call themselves a chippie”. Peter pointed to disastrous consequences of lack of regulation and openly named areas where disasters had occurred, “Tamahere … remember the fire?”, “leaky buildings”, “mining disasters” and “forestry accidents”. Tutors from all trades could point to disastrous events or experiences due to unsafe or unsound work habits and an unregulated or deregulated environment. Regulations and licensing standards are seen to partly mitigate such practices and provide improved quality in workmanship and protection for workers.

When tutors discussed the practical components, often undertaken in workplaces, and where employers verify particular aspects of the work, tutors tended to agree that problems could arise. In her role as a workplace assessor Sarah, who works with a range of apprentices and employers outlined her concerns: “It’s my experience that apprentices are not watched from start to finish so I have concerns as to the quality and consistency [of training and assessment]”. It was suggested that employers are busy and may sign off students because “they get the feeling it’s been done”. Interviewees considered that this is where training loses consistency and quality. This aspect is discussed further in the section on industry.

Tutors were willing to point out that educator creativity and innovation is required to stretch students beyond the unit standards and to do their best. Karl proposed that, while unit standards and national qualifications were in the hands of the standard setting boards educator creativity in delivery methods is about the skill of the teacher. He presented the unit standard as “just the assessment” and pointed out that the assessment is “… not the learning”, “it’s how you link them together” that makes the learning. Ivan argued that “you could say that having a standardized package is a good thing” and Nigel concluded “at least it’s a bit of a standard”.

When asked what they would change about their course if they had the opportunity most tutors were keen to have more time to deliver standards in a more cohesive and integrated way. In general they felt the pressure to rush through standards and found that

* This refers to the 2008 ‘Tamahere Tragedy’ where a gas fire and explosion at Icepak Coolstores killed a fireman and injured seven others.
the attention to the skills and knowledge of the trade tended to come second to the passing of pre-packaged standards.

The skills and knowledge of the trade

According to those interviewed, the skills and knowledge required in many trades are constantly changing. Tutors discussed changes to industry skill requirements, changes to equipment and materials and the resulting ongoing changes and updates to unit standards and national certificate courses. Due to a more mechanized environment some trade skills are no longer taught, for example carpenters no longer learn how to sharpen a saw. However, according to Bart, while some skills may be required less frequently in certain trades, they may still be required in a small way or in some parts of industry. Indeed, Bernie considered some of the skills required less frequently in the modern environment may only be needed for a small percentage of the work, but that small percentage is not going to go away. He explains that “at the moment the older tradesmen can do [this work] but in 10 years from now when they’re gone or 20 years from now who is going to do it [if we’re not teaching it]?” While certain skills are not taught any more, and “…90% of [this particular] work can be done by computers, we still have this 10%, the question is who will do this 10% when it’s needed?”

While trade tutors acknowledged that the work of trade education was undervalued, it was also suggested that the skills and knowledge of the trades themselves were not recognized for their level of complexity and difficulty or for the amount of learning required to become a successful tradesperson. Bernie, who also sits on an academic standards committee within one of the research sites, stated that compared to some of the academic courses that come through the polytechnic, he believed that the trades courses at the same level were more complex and complicated. The high level and complex concepts within trades are often not recognized, yet interview questions that inquired into details of the actual skills and knowledge were the most complicated aspects of the interviews. Possibly this is because tutors were reluctant to test the interviewer’s ability to understand the language and concepts. Overall, however, tutors had similar opinions about some of the fundamental skill and knowledge requirements.
Interestingly, there was a high rate of agreement across trades about the kinds of basic overall skills required for successful work in a trade. These included reading and interpreting plans, drawing, measurement and basic calculations, safety, using hand tools and machinery correctly, maintenance and care of tools. Ben pointed out that “key principles are more important than specific skills”, and that while “machinery might change, the principles stay the same” and “if we stick to the principles it will serve them well no matter where they go”. Similarly, it was suggested that training never really ends, “we all keep on learning”, and that “individual employers will provide specific training” if it is needed while the work of trade education in polytechnics “should provide more broad principles”.

However, some things have to be done “correctly absolutely” and this needs to be taught. Many tutors identified accuracy as an important aspect of work in a trade environment. Accuracy was articulated as accuracy in measurement, whether measuring by hand or with equipment, accuracy in reading test equipment or using testing machinery, accuracy in cutting, lathing or in laying out a construction site.

The importance of accuracy extended to the importance of checking work. Bill suggested that students must know to check their work thoroughly. For a diesel mechanic “a small split pin out … could be a catastrophe”. Overall, tutors were reluctant to separate the skills from the knowledge and theory and stated that practical and theory projects are best linked and taught alongside each other.

Matthew talked about quality in relation to engineering: “Quality, you have to set a level of quality. She’ll be right, is never right. Never”. Matthew talked about training students to do their work well, to improve, to get better, “Best of your ability, if your ability is not flash from day one which is to be expected… Strive for excellence…. I’ll do it again, I’ll be better at it and I’ll do it again and I’ll do it again.”

Many tutors underlined the importance of knowing processes and understanding sequences within that process. This included knowing what has to be done but also knowing why things must be done in a particular way and in a particular sequence.
Matthew stressed the importance of tradespeople needing to “have an idea of why… something fails”, and work through a process for fixing it. He suggested that, “It’s not just making something [it’s] slowing down and thinking things through and [considering] how it is going to look at the end”, to “think ahead” and be able to “estimate how long something is going to take”. In this way, visualization of a process as well as having a big picture understanding of a trade and the trade processes was identified as key. This, it is suggested, takes several years following a qualification to acquire.

Ben suggested that the key skills for any trade are to know how to use the appropriate tools correctly and to know to communicate: people skills. People skills or soft skills were mentioned with relative frequency in the interviews. In some interviews they were highlighted as more important than the hard skills. For example, as stated by Bernie, these are “the things everyone pays attention to but we never measure because we are too tied up with the competency and standards”. Ray suggested that the skill of working as a team is “almost more important than the actual specific trade related skills”. This was echoed by a large number of tutors. Bernie suggested that the soft skills are “possibly more valid in our full time course than the hard skills”.

Soft skills and trade-based skills or hard skills were often mentioned in the same sentence when tutors responded to interview questions that asked for the main skills students need to learn. Soft skills were identified in different ways including being reliable, turning up on time and communicating well with others, including the public, employers and colleagues; being able to “fit into a team environment”, to “work clean” and “have a clean environment”, to follow instructions, or be able to ask questions or to take responsibility for mistakes.

Darryl outlined that it is important for students to have “the necessary skills to carry out the tasks but they’ve also got to fit into a team working environment”. He suggested that “they’ve got to be reliable, they’ve got to get rid of any baggage” and find ways to work with people.

For some tutors these were seen as life skills. Simon discussed the importance of life skills in his pre-apprenticeship course and this going hand in hand with trade skills, even
something as simple as “making sure you have a good breakfast before you start a full day’s work”. Timeliness was mentioned with regularity as an important skill that students need to acquire. However, Darryl suggested that “timeliness is not a skill but a habit”. He outlined that part of the work of a trade tutor was to get young people into good work habits. This reflects some of the earlier discussion around the work of tutors and the work readiness of students. Having students show respect for colleagues and others who work around them was another aspect of this category of skills mentioned with frequency.

Knowing the rules for the industry they are in, including requirements and standards, was outlined as important by tutors, but also how to work to ethical standards and follow ethical guidelines. Similarly, it was suggested that students need to be taught the appropriate behaviours for working in the trade, how to get along, how to do the kinds of things an employer expects.

Different employers bring different cultures to the way they do business and expectations in industry will vary. Bill stressed that there is obviously a “huge variance in any workplace”, therefore, young people need a general understanding of the processes inherent in the work and to engage their problem solving abilities to interpret issues and solve problems. Matthew considered that students need to “be able to look, work out, fix [problems]”. Overall, tutors suggested that students need to have a sound overall knowledge of the particular industry in order to problem solve. An overall view of any industry is vital according to the majority of tutors and the ability to manage the peculiarities within particular aspects or parts of industry will come with time.

Rick echoed the views of a number of tutors when he suggested that “certain laws …remain the same”, that there are constant guiding principles despite changes in equipment, materials or workplace. He suggested that teaching those laws was a mainstay of his work as a tutor and enabled students to transfer their knowledge from one aspect of the trade to another.

The importance of teaching transferable skills was emphasized in a number of the interviews. Tutors suggested that they do not always know in which part of industry
students will work, whether students will stay in the industry, or at which end of the industry they will eventually be employed in, so “we hope that what they learn here they can take with them” (Darryl), and that those skills will have a “transferable quality which will stand them in good stead wherever they go” (Bill).

Bart stated that the value of learning in a polytechnic is that “we have always prided ourselves on providing a very broad base …. [in industry] a lot of workshops specialize … we’ve always trained everybody so they can go across all areas”. This was echoed by Bill who suggested that tutors “want to provide transferable skills” of “value to the apprentice” and that while industry provide particular skills relevant for their specific environment a polytechnic trade education provides “a really balanced rounding of core skills” that will provide students with a sound base.

Tutors discussed the value of industry experience as an important aspect of learning and vital to the development of students’ skills and knowledge of the trade. They spoke of the importance of simply “being on site”, working as part of a team or alongside a tradesperson and having the “language wash over” them. This important learning experience provides exposure to other tradespeople, other sub-trades, and is seen to support student understanding of the trade-related processes from beginning to end. Bernie considered that working on the peripheries and “eventually mimicking” the actions of others was an important experience. This experience gives novices the opportunity to learn the names and functions of a wide range of tools and by handing them to experienced tradespeople they learnt how to handle them appropriately. By watching the “economy of action of skilled tradespeople they learn how to use the tools” (Bernie). As Roy suggested, industry experience provides young people learning a trade with “a grasp of the culture … it’s important to be able to survive in the industry … be a team player and work along with others”. Darryl stressed that it is “very, very important to teach them observation, because it’s by watching that they learn”.

The vocabulary and language of the particular trade was outlined as an important aspect of the skills learnt while studying and learning a trade at a polytechnic and in industry. The relevant ‘literacies’ of the trade are taught and become apparent to students as they advance in their learning; terminology specific to the industry, the particular ways in
which that trade and industry communicate information through drawings, plans and diagrams; the knowledge of particular products and materials for particular uses. Students learn the specific cognitive approaches within the trade, the way problems are conceptualized and solved and the way experienced tradespeople approach a problem or think through an issue, the processes of elimination they use and the procedures undertaken to decipher events. Novices learn why it is “important to do things in a particular way and in a particular sequence”. In short, students begin the process of enculturation into the trade.

There were some common ideas about what constituted good trade teaching. In particular Bart discussed the “practice effect”, where mastery comes only after a skill has been practised over and over until “you don’t even know you’re doing it” or it becomes second nature. Karl outlined that the practice effect is just repetition, and “to get good at something you have to do it over and over until you can do something without thinking about it”. This idea was echoed throughout the interviews when skill development was discussed. Darryl outlined that to teach a new skill tutors use two main means: “demonstration, repetition; demonstration, get them to do it; repetition, let it become second nature for them.” As Murray says, “I can tell you and show you how to weld with an arc welding machine in about 15 minutes. But you won’t be able to do it in 15 minutes… practice, practice, the only way to become a really good welder is to burn rods.”

Certainly, the idea of teaching key trade skills by demonstration and repetition was commonly asserted in the interviews. Bart described welding, for example, as “an art as much as it is a science” and outlined that skills such as these cannot be taught exactly and that it is “only experience that gets you close in time”. He suggested that a lot of the real skills do not come until novices begin working on their own, making their own decisions and learning by trial and error. At the early stages of learning a skill Matthew outlined that it is often a matter of providing students with very basic information, “showing them what to do and allowing them to do it”.

Tutors agreed that the work of a trade practitioner and the work of a trade teacher required different skills and knowledge. Two tutors suggested that the trade educator role
is becoming more and more one of teaching than training. While one tutor (a newer tutor) was not sure that this was what he envisaged or whether or not he agreed with the change, most tutors were not interested in spending much time discussing the differences between teaching, training and instructing. One tutor suggested there was no difference.

It was often suggested that while trade tutors are very strong industry practitioners, they are not always particularly strong in ‘education’. Those who had undertaken a diploma level qualification found it easier to see themselves as educators. Bernie discussed how he became an educator when he undertook diploma level training with “many other people all in the same boat but from different parts of the polytech”. Bart, following diploma level teacher training, could talk about the individual, the student rather than the skills.

Formal teacher training was considered a useful and valuable component for being a good trade teacher. Tutors who had undergone teacher training described it as useful, thought-provoking and worthwhile. Where time and resources had allowed tutors to take time away from their teaching responsibilities to engage in professional learning and to develop educational or teaching skills, tutors reported benefits. In particular, tutors reported a positive experience when courses were conducted within a community of other practitioners in a similar position – trade experienced and teaching novice. Bart clarified that “trades people are very task oriented” and he pointed out that therefore teacher training that is task oriented makes a difference. Certainly it seems teacher training supports a shift in where tutors put emphasis in their work.

Persistence and believing in students emerged as key aspects of good trade teaching. Interviewees suggested that a good tutor brings to their work the ability to “stand back and let people learn” (Ben), to be “honest with your students” (Matthew), to “have a sense of humour” (Karl), to “mentor students when they need it” (Darryl), and to “have high standards and instil those high standards” (Bill), also to “analyse your work with students” (Simon), to “not be scared” (Mark) and to “get a good teaching qualification” (Bernie).
As Matthew suggested, “A good engineering tutor has to understand more than just engineering. He has to be able to look inwardly and recognise his youngster in others.”

**Institution and industry**

Interviewees made frequent reference to the necessity and inevitability of ongoing learning for tradespeople. The importance of upskilling to maintain industry currency and the continuing need to learn new skills within industry was highlighted as an important aspect of trade-based education. Much of this learning is ‘in house’ and the requisite skills are based on individual employer needs. Bart suggested that informal learning in the workplace is “very, very powerful and strong learning, [however] there’s no recognition of it, it’s just what you learn”. In contrast, within a formal polytechnic environment students are provided with an opportunity to both expand on what they know and extend that to a qualification.

It was suggested that there is a lot more theory involved in the learning of trades in the contemporary trade environment and that workplaces do not have the time for that. “Employers and those in industry don’t have time to explain what they are doing and why they are doing it” (Ray), and “often it [isn’t] until you get into that classroom environment with a skilled tutor who [is] able to through it step by step” (Ben) that apprentices and novices begin to understand.

Mike identified polytechnics are a way of providing opportunities for “students who don’t have contacts … Polytechs give everyone a fair go”. As Bart outlines, “You get to see a little bit of everything. That’s an important role for polytechs.” When tutors discussed their own polytechnic or formal training they spoke mostly of the benefits of the breadth of training provided, “I learnt things at a polytech which I’d never learnt in industry.” It was acknowledged that providing breadth of experience is costly but that such training provides a longer-term advantage both to future employers and to trades people, particularly in terms of adaptability to different roles and overall knowledge of industry.
However, that it is not possible to learn everything was highlighted in interviews. In order to learn everything required to be a good tradesperson within a polytechnic, a balance is required between industry and institution. Co-operative relationships therefore between industry and institution are a necessity for good training and education outcomes, according to tutors. However, this is not always an easy situation and negotiations are often fraught. The truth is, as outlined by Peter that “training is expensive” and while everybody wants to benefit from training “nobody wants to pay for it”. Ivan said that a key concern is getting the balance right between on-job education and training and the essential knowledge and skills that are going to serve the industry.

While on-job training has some real benefits for industry Ivan said that such training that is predominantly on-the-job has “some real pitfalls”. There was a concern that such training can be ad hoc and disconnected. Furthermore, concern was expressed at a lack of knowledge and skills of industry professionals who are marking off standards through on-job formal training regimes. He suggests that there is a need to find a balance between “off-job education and training and on-job education and training”. Off-job education and training, he suggests, is that “underpinning knowledge and skills”. Ivan said that where such underpinning skills and knowledge is best taught is an ongoing argument whether it is in short block courses at polytechnics, in pre-trade courses, or as part of the initial polytechnic training. Mike suggests that much of this is best taught in a polytech environment where tutors have the time, the resources and the inclination or drive to work with sometimes reluctant or confused novices. As Karl pointed out, “teaching is our core business” and “we know what we’re doing in this environment”.

Angela considered that her experiences as a programme leader point to the very competitive nature of the training market. She said that different industry organizations often have conflicting views on the delivery of training and the treatment of trainees, and that providers are often in a position of having to compete with each other for students.

Mike said that this competitive and market-based environment and the resulting pressure within the polytech to increase the retention and success of students increases the anxiety for tutors particularly in terms of accepting students who may not have the prerequisites to demonstrate that they will be able to pass the course. It also puts pressure on
organizations in the area of pass rates and some concern was expressed about a possible resulting lack of consistent standards in this area as tutors are pressured to provide high numbers of completions. Tutors recognized that a polytechnic is a business with the requisite profits and outcomes faced by any business.

Whether training is undertaken in industry or a polytechnic aside, tutors considered that training within an ITP does have advantages for industry and trainees. According to Karl, “we have more access to teaching resources”, “we have a teaching knowledge base” and other tutors to talk to about teaching. Bart considered that “we have more of an opportunity to teach them better…time to prepare, time to see how we can do better and change how we teach”. Karl also suggested that tutors in ITPs have “a thing called pastoral care”, which is lacking in industry. Matthew identified that many young people who completed training within the polytechnic environment and went on to be good tradespeople, would not have survived in industry training. Karl outlined the value of being able to “slow it down”, where you can pace the learning in response to the students and you are not driven by industry deadlines. Overall, the biggest difference tutors outlined for learning in a polytechnic as opposed to industry was that students have “contact with someone who cares about whether they achieve the standards or not”.

Polytechnic education and training for trades does, however, face challenges within the polytechnic environment itself. The hierarchical system within a polytechnic was identified as an area of difficulty by three tutors, summarised by Bob as, “There is an awful lot of discounting and academic snobbery that goes on.” A number of tutors considered that trades were seen as lesser in a polytechnic environment. There was some discussion about the lack of technological support and the inferior facilities provided in some trade environments, compared to the resources provided in other academic disciplines.

Quite a strong ‘us and them’ sense emerged in the interviews. The lack of connection the trade tutors felt from ITOs charged with planning, writing and moderating standards and qualifications was one source of frustration. Another was the academic timetable in institutions. Certainly, a sense of unease was due to a general sense that there was a lack of consultation and communication. There was a perception that many decisions were
made in terms of curriculum, assessment and delivery that tutors perceived they had very little control over, and this was the cause of some frustration.

Similarly, the emergence of trade academies in schools highlighted some potential conflicts due to the different ways schools and ITPs structure their timetables. Who fits in with whom, how easy it is to work together and what is best for the student and the trade are all issues that need ongoing resolution.

However, despite the potential for conflict, most tutors considered that training which resulted in good quality tradespeople was a combination of industry and training providers or institutions. Nigel considered that “ITPs need industry to do the final part [of training]” and suggested that “we can give a certain amount but an awful lot of growing up happens in industry”. It was agreed that polytechnics are working more and more closely with industry, and that the key to success was ensuring those connections worked for both student and industry.

However, ‘industry’ as a collective term is not entirely clear. Tutors clearly differentiated between industry and ITOs. It seemed that connections between industry as employers and polytechnics were occurring on a fairly regular basis where tutors sourced roles for students either as short-term work experience opportunities or as longer-term apprenticeships. Building relationships with the wider community of industry-based employers and suppliers was seen as an important aspect of their work. ITOs in general were seen as completely separate from this relationship building.

Some concerns were raised about the training provided through ITOs and in industry. Industry trainers, it is suggested, have a completely different approach. Their work is “to visit students on site, deliver workbooks and check workbooks off”. This, it is suggested, is an administrative role, not a teaching or training role. Mike was concerned at how “we’re setting students up to fail” through lack of support in industry-based training where students/apprentices through ITOs are delivered “a big folder with all the units they have to do” and are reliant on employers to ensure that the training is appropriately covered.
Furthermore, since many areas of industry are specialized, industry-based employers may not have the breadth of knowledge required to effectively instruct apprentices in specific areas outside of their own area of expertise. With little support, it is suggested that there is a very high rate of non-completions through ITOs, or an apprentice can take up to five years to complete a national certificate. In addition, a number of tutors were concerned that whilst ITOs were set up as standard-setting bodies and not as training bodies, a number of ITOs were, in fact, training at the time these interviews took place, and in this way engaged in competition with providers. Mike suggested that there was a sense of a “battle trying to get the same pool of apprentices or students”. Some recent attempts to eliminate this behaviour by ITOs has been undertaken through legislative changes. Nevertheless, the sense of frustration and lack of trust for ITOs is evident.

Because of the cost of polytechnic training, two tutors suggested that ITOs are minimizing the amount of training undertaken within a polytechnic. While this is their choice, some courses have been cut by a half, from 20 hours to 10 hours. Although this reduction is a response to their own funding also being cut, Bob asks, “what kind of training do we want?”

Tutors in some cases reported that the ITOs representing their industry were “Okay”. In other instances ITOs were described as being out of touch, “disconnected from what we need” and “disconnected from what wider industry wants”. There were suggestions that they were not up to date, needed to be more organised and were insisting on the delivery of standards that tutors believed were questionable. These organisations were also perceived as not listening and, as stated by Bill, “enclosed in this ivory tower where they make decisions …. and never ask us”.

Bill described the ITO as “uncommunicative, uncooperative and critical of what we do”. This, he suggested, made things very difficult. Bart considered that the ITO did not really “achieve anything”. Tutors tended to describe their own efforts at making connections with industry and organizations, identifying good employers and manufacturers and building relationships independently of the ITOs. Ben considered that ITOs were often responsible for changes in standards, which happened abruptly, and “we are suddenly
presented with it and [we don’t know] where it has been driven from”. Certainly, a sense of suspicion surrounds the relationships tutors describe with ITOs.

Similarly relationships with industry are not always easy or straightforward. Mike clarified that while they can spend a lot of time building relationships with industry, “it is often with cap in hand” and the main reason an apprentice is taken on is because there is a financial benefit to the employer where the apprentice can be paid at a cheaper rate and is a good labour source.

Juggling industry organizations can be problematic since the stakeholders who play a part in the trade education puzzle think differently about the purpose of education and approach training with different goals. Employers generally want skilled novices at cheaper rates and ITOs work to set government targets. Tutors in polytechnics, while juggling the needs of industry, tend to also keep the well-being and future of their students in sight as well as the health of their trade.

**Trade employers**

Tutors tended to agree that the former apprenticeship system was a very good system for training skilled people, but “it was a very expensive system” (Bill). The current system however, was considered as having some real flaws particularly in terms of the lack of formal training agreements between employers and apprentices or trainees. Two interviewees suggested that there was a real risk to novices that apprenticeships were used as an expendable form of labour. Ben said that whilst there is a contract between the trainee or the apprentice and the employer and that agreement provides an understanding that the employer will train and the trainee will undertake to learn, “it is very vague”. Mike and Angela both expressed concern at the variability of the “quality” of employers engaged in training.

All tutors considered that there were some very good employers who were skilful trainers, but others who pay the “minimum wage and expect trainees to work 7.30[am] to 9 [pm]”. Tutors expressed concerns that within this modern training environment there is often a lack of supervision or a lack of undertaking to ensure the trainee gets a wide
range of experiences. Karl explained that in his experience some trainees will spend all their time completing one part of a process: “they will become very proficient at shortcuts and processes that will speed up [that] process” but they are not exposed to other aspects of work within the trade. In order to get the appropriate or expected exposure, the trainee needs to find another position in order to expand their practical experience. Similarly, there is a lack of loyalty from employees or trainees. As Bart points out, it is problematic for employers to invest too much in training when trainees “take their portable packages with them and off they go”.

Indeed, it was suggested that employers often want a worker to be able to undertake one specific task. Bernie questions: “What kind of training do we want? We have an option of having people who can diversify or we have workers who work within a particular area and have people to co-ordinate that work.” Interviewees overall suggested that we have a choice about the kind of training we want, and if training is to result in high quality tradespeople, then we have to understand that it costs money and takes time and skill.

Tutors who were interviewed pointed out that employers are in business to make money. Some employers take short cuts to ensure they make a profit. Health and safety may be at risk. Illegal scaffolding may be in place and incorrect materials may be in use; power tools may not have the relevant safety checks, cables may be exposed and employers may overlook these concerns since their interest is to make a profit, or they are too busy to manage some of the aspects of their business well. Tutors who visited trainees on site could all point to concerns they had about on-site delivery of training. Karl highlights the difficulty that arises when tutors visit these sites and are in no position to make necessary changes: “What is our role? On one hand they are our student, we don’t employ them, but they are doing something, which is unsafe. It’s never easy.”

Tutors engaged in on-site visits and monitoring of students in the workplace report that verification forms which require employers to sign off units of work are difficult to monitor. There is an element of trust involved and Ben argues that “you have to accept that a person on site has validated that this student can do this piece of work …[but it can be] too lax”. Karl, who often visits students on site, stated that he did not believe there
was sufficient input for many trainees in industry training and that “no-one is going to pay us to go on site and do a full assessment”, so we “have to accept that if it is signed off [by the employer] and that the student has completed the task to an acceptable standard.”

This concern is further highlighted by the ongoing discussion around lack of high quality skills in the workplace. Because there has not been a strong recent history of well-trained apprentices in the trades, many tradespeople in industry do not know enough to take on an apprentice. Ray considered that “there are a lot of unskilled, untrained people trying to train apprentices, so where do standards go?”

Tutors suggest that it is a big ask for employers to be involved in the training of young people. Bernie believes that “the costs in Auckland are so great that every minute a person is working they’ve got to be earning that dollar to remain viable.” This means that if the main focus for an employer is running a viable business, the details involved in the training of a new person which are not relevant to the immediate profit of the business, are likely to be sidelined or overlooked. Tutors lamented the formality of a bona fide and enforceable training agreement between employers and trainees. One tutor suggested that the “good trainers under the ITO system tend to be the ones that have experienced the old world training scenario” and understand the commitments of training.

An inconsistent employer approach as to how and whether apprentices are supported to attend block courses delivered in polytechnics was also outlined as problematic. Some employers require apprentices to take the time out of their holidays and to pay for the courses themselves, others provide the time and the cover for some or all of the course time and fees. The lack of indenture was suggested as a possible disincentive for employers to support trainees or apprentices in terms of training.

**Connections and conflicts: Inside the big picture**

Throughout the interviews tutors spoke about their work as tradespeople and how this related to their work as educators and tutors. Much of the dialogue was about connections between and within trades and aspects of trades that connect them together
and connect their work to the wider environment. Connections and the building of relationships in their work as tutors was a significant theme in interviews and discussions. Thus the theme of connections and its counter-theme, lack of connections, emerged. References to these themes as they appeared in interviews are outlined and discussed in more detail in the next chapter.

The idea that the work of one tradesperson has a downstream effect as suggested by Darryl seemed to be a powerful idea. For example in heavy automotive, “say the grader failed, the roller can’t roll, metal trucks can’t metal.” Similarly, in construction “if the concrete floor isn’t straight, the frame isn’t going to be straight” (Ben). Each job is connected to another job and the speed, quality and standard of workmanship has a direct impact on the person following.

Peter discussed the mix and combination of skills required for a large project. The geologists, the civil engineers, the drillers and the structural engineers, the builders, “[are] all using their individual skills and abilities, to do what? Put up Pak’n’Save.” The idea that successful endpoints for large or small projects are the result of people pooling their skills and working together arose frequently throughout the interviews.

Similarly, the number of discussions about the interrelationships between different workflows was significant. Tutors discussed the importance of working together in a workplace, creating and building positive working relationships, being responsible for yourself and for others and the importance of keeping to a schedule since what an individual does impacts on those coming after. Tutors considered that learning on a worksite reinforced this connection to others. For Ben, being “amongst all the happenings” was not just an important part of the learning experience for students, but a way of keeping in touch with industry as a tutor.

Ben painted a picture of the “flow-on effect of a poorly built wall where the gib board fixer assumes ‘well this guy doesn’t care too much’ and whacks the gib sheets on with a less than perfect finish and the gib stopper looks at the bent wall and doesn’t bother doing a thorough job and then the painter comes in, he looks at the bent wall … and the less than adequate stopping and throws on two coats of enamel and walks away”. So the
imperfections and the failure to complete a high quality job are set up by the first person in the chain.

A picture such as the one above outlines the ramifications for poor workmanship and the effect of one poor piece of work in a chain, which becomes compounded. Setting a high standard is seen as the responsibility of the first person in a chain of tasks. It is a lesson to the student to undertake good quality work since the work that he or she undertakes is a signal to those coming after. The scenario also signals the risk to quality work when there is a fragmentation of work tasks within an overall undertaking. Indeed, a lack of connectedness in work where tasks are undertaken by a number of different workers, was seen by tutors to put at risk quality outcomes. Yet this way of working is increasingly seen in sub-contracting or outwork in trades. Fragmentation of work was considered to lead more easily to a less than good job where no single person is responsible and this lack of high quality work according to Darryl “can run into significant dollars”. Darryl goes on to suggest that this is something “I really instil in my guys.”

Similarly, Mike discusses the importance of working together and how the work of an engineer in a factory depends on the relationship with the person who works the machine: “You have to draw on their knowledge, he knows more about how the machine works than you do”. Engineering, he suggests, “is rarely an individual endeavour”. Darryl agrees that it is important that students learn to listen carefully.

It was suggested in interviews that being able to connect a series of activities or processes or in the words of Ben, “join the dots” distinguishes a skilled tradesperson from a ‘facet worker’, or a worker who can undertake only a facet of a larger job. Explicitly, he outlines, a tradesperson is able to do a job from “go to whoa”.

The concept of connections also linked directly to the everyday work of tutors, through the number of connections that tutors maintain in providing a whole experience for their students. Ongoing connections require development and maintenance to ensure high quality training. This includes connections with other tutors both within and outside of their institution, employers, industry representatives, industry organizations, suppliers of
materials, professional organizations and, increasingly, relationships built with newer providers of training.

The development of new models for trade training is apparent, and tutors discussed their perspectives in this area. Partnerships between Institutes of Technology and other smaller private providers and with schools are increasing as trades education increases as funding for school trades academies and trades in schools. While formerly the bastion of polytechnics and industry-based apprenticeships, trade-related courses can now provide students with unit standards which can be attributed to NCEA results. Formal secondary school education and trade courses can thus be undertaken concurrently. Negotiations and discussions in this area are new and models are slowly being developed. However, questions such as who should fit in with whom and how polytechnics and schools should work together were raised in the interviews, more particularly in the rural polytechnic. Some unease was expressed about this ongoing development.

Schools and polytechnics are structured quite differently in terms of timetabling and in their expectations and monitoring of students. Tutors unfamiliar with the challenges and nuances of school-based students can experience difficulty. This is not the kind of teaching they necessarily thought they were going to have to do.

The suggestion of competition for student numbers was raised, as was the concern about industry experience and knowledge of instructors within schools delivering industry-based unit standards. The complexity of connections and the ongoing changing interconnectedness of the work of a trade educator within a polytechnic emerged as a key conflict.

Grant discussed the differences between school and polytechnic and suggested that schools are for learning general things, whereas learning a trade is a specific thing and should be done in a polytechnic. He commented that “schools aren’t doing trade training properly, I think”. There was some recognition that schools and polytechnics need to work together for the best outcomes for students. However, there was also some nervousness about whose role it was to deliver trade training.
Such difficulties and conflicts inherent in the trade educator role became apparent through the interviews, although they were not inquired about directly. Interviewees, both tutors and those in programme leader, or leadership roles, discussed the challenges associated with a constantly changing environment. Mike suggested that the landscape is always changing and Angela outlined that her work involves a move from “crisis to crisis” in an attempt to manage and function within the ongoing fluctuations around funding, industry, professional association shifts and legislative adjustments.

Changes to apprenticeship and training models, changes within industry, changes in educational structures and the resulting change in the student body, policy and industry expectations, technological advances and shifts, labour model reforms were all touched on in the interviews. The fact that high quality training is expensive and complex was outlined. Bart, a programme leader, suggested that for industry, training is too expensive for the return. Angela commented that polytechnics too have to run viable courses and there is pressure on programme leaders to ensure that courses return profits. She suggested that in order to meet profitable outcomes, “it’s always a juggle”.

**Students**

When asked about the biggest challenges in their work, tutors turned their discussion to the concerns they have for their students. However, as well as being the biggest challenge it was also the most rewarding. The most frequently cited response to the question that asked for the biggest rewards was “seeing students achieve”. Certainly students were at the centre of much discussion.

Many tutors outlined the general educational needs of students and suggested that some students who were not achieving in the schooling system came to them “without the basics” (Grant). Some complained that they are not schoolteachers, or suggested that schools were not doing their job properly. Frustration was expressed at an open entry policy that allows all students regardless of fitness for the role to enter a given course. Bernie outlined a situation in his mechanical engineering group where a student was too large to fit under a car and could therefore not undertake the course requirements. “Students that can’t complete the course for whatever reason are being set up to fail and
so are we,” he suggested. This does raise the question, however, about the role of trade training in polytechnics and whether trade education is exclusively about the trade, or whether other forces are at play. Some tutors, like Simon, identify with the need for the student to be involved in doing something. Nevertheless, there are always pass rates to consider for the viability of a programme and the reputation of a tutor.

Tutors discussed the concerns they have for their students. Many interviewees expressed concern about whether or not students would find jobs following their training and how they would manage an escalating student loan bill without the promise of work.

In terms of students, tutors discussed the importance of relationships. Ron said that the most important thing was to “get students onside” (field notebook 1, 2010, p. 8). Similarly, Mike considered that getting alongside students was a vital part of teaching the trade to novices.

Simon discussed how the role of the tutor is to widen the horizon for students, “help them to see outside their world” and guide and support them to a better life. He also suggested that when some of the barriers students experienced at school are still with them and cause initial difficulties, “it takes us quite a while to get those barriers down”. Simon, who works in a rural satellite site teaching mainly students referred from WINZ, discussed how he worked with students with a focus on care. He admitted that sometimes he was hard on them but always ensured he had food, coffee, wet weather gear and warm clothing available. Simon discussed the importance of training people to take responsibility for their own lives, to eat well and turn up in the appropriate gear ready for work. In particular, he spoke of the importance of encouraging students “not to give up”. He acknowledged, however, “that you can’t save the world”.

Ron suggested that part of his work is to shape a student to become someone an employer wants to take on: “you know, someone who can communicate at industry level, use the language, communicate well, is polite” (field notebook 1, p. 8). He also suggested that industry wants young people who have good basic skills, “good English and good Maths …” Ron said that most of the other skills “they pick up the other stuff on site”.
This understanding that the work of the tutor is more than the teaching of trade-based skills and knowledge was evident in workshop visits and conversations. As Rick said, “they learn to take instruction, to work together”. Tutors see themselves as preparing students for the world of work. Matthew suggested that we teach students the culture of work, “get here on time. Stay all day. Don’t develop a need to knock off early”.

Tutors agreed that many young people are trying out their trade. For Matthew, “I want them to be what they want to be. I don’t want them to be what they don’t want to be.” He acknowledges that his trade might not be for everyone, “Like if they come in and do a bit of welding, a bit of engineering and say ‘Oh God I don’t want to do this’, well good. You’re not left wondering.” Bart suggested that “they have to fall in love with it [welding].” Darryl considered that students have to own the trade, “if they look at it and say ‘yes that’s mine, that’s me’, they will motivate themselves…something has grown inside them.” He also suggests that with those students who decide they do not like it, “you can do your best for them and hope that eventually they will find something they love”.

Tutors described the changes they saw in their students. They become more confident or “they mature somehow” (Grant), they “know how to correct themselves” (Bill), “they grow up” (Ben), or become “someone who can think” (Matthew), “a reliable worker” (Karl). Mike described the “wow” of this transformation: “I’ve had the pleasure of seeing some students who started as a handful and over a very short period of time have become someone else but they look the same.”

The idea that the role of the tutor is to support students to manage their lives through their study developed in interviews and discussions. Discussion points that were raised by tutors included managing absences through family concerns, court appearances, transport worries, financial concerns, food, accommodation, and clothing. Many aspects that may have prevented a person from achieving in the compulsory system continue into the tertiary trade sector and tutors who want their students to achieve well somehow manage to support their students through many of these challenges.
Darryl told a story of a young student who was living in his car but who finished his course and eventually got a good job and became a success, “I mean people say I’m not his brother or that their problems are not my problems but if you’re going to be a professional educator you can’t do that, end of story.” For Mike you have to be a “mentor, pastoral care, educator, friend. I use that term loosely. I’d rather be a friend than a bad guy because, if you’re not approachable people won’t approach you.” Mike acknowledged that often his young students need someone they can talk to.

Some tutors became involved in differing degrees in the support of students through difficult patches, and some refused to become involved. However, in spite of their level of involvement, the challenges and rewards of working with students was mentioned with high frequency.

**Stories**

Tutors outlined that their own experiences of working in industry featured in their teaching. Darryl said that this is “very, very important with teaching to give real examples”. Especially in terms of health and safety, tutors could give real examples of accidents or misfortunes that they had witnessed on site or had experienced. Real stories, according to Bob, “give credibility to what we are trying to teach them”.

As we discussed the stories that tutors used and the stories of their own work backgrounds, more stories emerged spontaneously as narratives of tutors’ own lives in education, training and their trade. Stories of their experiences as apprentices and how and where they learnt their trade came forward. Tutors discussed key mentors who had made an impression on them and how particular moments within their training had made an impact on their future. They discussed how they came to be a tradesperson, what parts of the trade they were particularly proficient at or liked. Many tutors outlined their working backgrounds and made particular reference to the large projects or significant sites they had worked on. Some of these sites have iconic value within the New Zealand psyche – Marsden Point, Benmore Dam, Auckland Medical School, Ohakea Airbase. Tutors expressed significant connections to these sites and projects and spoke at length
about their involvement, what role they had and how they were part of something of significance.

Stories of their own difficulties when undergoing their training also featured. Mike said that “when anybody is having trouble with something I tell them that I had trouble with many, many things throughout my apprenticeship. My apprenticeship wasn’t very flash…but I got through it.” This, he believed, encouraged students through the difficult times, “I tell students that we learn from mistakes that’s how I know so much.” He tells them to “learn and move on.” Others discussed the difficulties they experienced while completing their own trade training, and the particular hardships involved in completing their trade.

Tutors discussed the way their trade had “paved the way for [their] future”. Tutors referred to how much their trade meant to them. Many had left school early to complete a trade and had been referred through family contacts. Two had come through the Maori Trade Training scheme in the 1960s. Others had brothers, fathers or uncles in the trade. Some were encouraged by family members to enter the trade, some were inspired by mentors within the trade to continue and finish. It was clear that for tutors the trade was a significant part of their lives.

This led to discussions on the value of traditions and the fact that many of the skills they learnt are no longer taught. As outlined by Bill, “people don’t need to sharpen saws any more, they just go and buy another one”. Indeed, tutors made regular reference to some of the differences between the training they had experienced and the current training environment.

Overall tutors did acknowledge that training and trade education had needed to change and that the previous system was too expensive. It was considered that industry or government could not sustain the ratio of tradespeople to apprentices in the previous system and the amount of ‘down time’ for training previously provided. Tutors had no answers to the problem of quality training versus cost of training, but interviews suggested a need for more concentration on what worked for students rather than what worked for industry.
The fact that many workplaces are specialized and many of the trade skills taught under changing industry standards are developed in a compartmentalized way was raised as a key difference from their own training and a cause for concern in current training. Tutors pointed to their own very wide experiences within the trade, for example, Peter observed that traditionally a fabricator worked with a huge variety of metals. He understood how each of those metals behaved. He understood tool making, forging, copper smithing, as well as working with stainless steel. However, much of the work in current industry requires work with just one metal and much of the curriculum and standards have been altered to reflect this.

The apprehension about the narrowing of content echoes the comments outlined above about the importance of a broad base of knowledge despite increased specialization within many trades. Tutors perceived that the teaching of broad principles and the exposure to wide industry experiences, similar to their own broad based training, was important but not valued by employers or many industries.

Trade tutors celebrated the breadth of experiences they could undertake in a former large building site or project by rotating to different areas of the site or workplace. They lamented that now sub-contractors are involved in piecemeal activities and tradespeople often no longer undertake the whole job. However, both positive and negative comparisons were made. Roy considered that, in many ways, young people are treated better in the current environment than they were when he was an apprentice – especially when considering some of the “terrorizing tactics of tradesmen from the past”.

Tutors believed that their value as trade educators was due to their years in the trade: “the knowledge and skills I bring is learnt over many, many years of building”. Interviewees saw this experience as a very valuable teaching tool. “I have had a lot of things go wrong over the years …. you know you have got stories you can tell the students and it just makes a difference” (Matthew).
The future

Tutors had surprisingly little to say about the possible future of education and training in their trade. Most responses were neutral or negative. Bernie suggested that “there would be a necessary contraction of hands-on training”; Bill related to his own environment where subjects would change relative to the evolution of different fuels. Overall there was little positivity although Bart considered that change could be positive “as long as it’s not another financially driven episode”.

According Bernie, “the days of broad based training may be numbered” and there was a tendency to believe that the future would be different: “more removed from industry”; “more technical and computer based (hopefully not)”; “less face-to-face”; “more training at student expense”; “shorter and more specialised”. Ivan said that the most important future decision was to strike a balance between on-job and off-job training.

There was some unease that novices will be taught to specialize early in their career and will therefore have to retrain if they move to another area of the same industry. Bart stated that traditionally the value of having a trade and working in that trade was the variety of work that the tradesperson could undertake within a given industry, and yet “this seems to be changing”. Bart considered that while this might benefit industry in that apprentices have specific industry and site required skills “socially, … it’s a bad move”, since “the apprentice or the tradesperson hasn’t got that transferable skill that he had in the past”.

In the past a trade certificate was seen as a ‘ticket’ to work in a particular industry. A person with such a certificate could be relied upon to have the necessary skills and knowledge associated with the trade. They could go anywhere in the world and find employment. A ticket was recognition that, within that particular trade, a tradesperson “could do anything” (Bart). Bart lamented that “if my predictions are right that nice part of being a tradesperson will be reduced”. The concerns expressed are in recognition of the fact that the value of a tradesperson is reduced to that of a skilled labourer, or “piecemeal worker”, proficient in one aspect of a trade but without the breadth of skills and knowledge that provide a passport to work.
Tutors outlined concerns about the pressure to develop online and distance approaches. As one remarked, “You can’t learn to swing a hammer online” (Ray). But overall, tutors appeared to have little certainty about where trade education was going and the future was described as “not good” (Mike), “challenging” (Ivan), “bad” (Nigel), and “very poor at today’s rate” (Grant).
Chapter 8. Workshop visits and discussions

The threshold

During the course of this study I was a frequent visitor to workshops, ‘smoko rooms’, and trade teaching spaces. As a visitor to these workshops and sites populated by trade educators and students I was entering an unfamiliar space. Generally, I would stand and wait for permission to enter. Sometimes permission took some time in coming. I was entering a safety zone and was always aware that the rules on these sites were different from the rules I was familiar with in an educational organisation.

Signs requesting the use of safety glasses, closed-toe shoes and illustrations of the results of using dangerous equipment poorly were often on walls. Most workshop areas had very distinct yellow lines to designate the space between the necessity for safety gear and the outside world. Tutors were often busy and it was the students who would see me waiting and alert their tutor. This was helpful because it was not always immediately clear who the tutor was. Amongst the blur of blue overalls students and tutors looked very much the same.

A quick check was required to ascertain my suitability for entry to the workshop site in terms of safety gear. Some areas were more hazardous than others and sometimes particular tasks being undertaken in the workshop at a given time required different safety gear. Sometimes I was required to wear safety glasses but closed-toe shoes were a basic condition of entry. Tutors in general were extremely welcoming, were keen to talk about what they were teaching and how they were teaching it. It was always a positive experience.

 Crossing the threshold demarcated by broken yellow lines was a reminder to me as the ‘outsider’ that this was unfamiliar ground. The environment – the smells, sounds and images – looked, sounded and felt like an industry environment. As a person new to this kind of workshop space I was not immediately clear that I was entering a training or educational space. The areas and set-up were very different from a traditional classroom or lecture theatre. The rules were different, the clothing was different, and the teaching
work that occurred was unlike what might traditionally be called the work of teaching. These are spaces where industry and trade merge with training and education.

A carpentry workshop

Fifteen students are visiting from a rural high school. This is a ‘taster course’. All students are year 11 boys on an ‘experience’ day from a rural high school and have travelled some considerable distance for this day at the polytechnic. This is an enormous space with high ceilings. The workshop contains timber, machinery, a timber shed and the walls are covered in timber samples, roofing samples, boards of different tools and fixings and safety notices. The students and tutor that I am visiting occupy just one corner of the massive workshop space.

The morning had been spent putting together a pre-fabricated building and students are now working on constructing individual timber toolboxes. Most, but not all, students are wearing ear protection. An exemplar toolbox is available on a central bench for students to refer to. There are a number of workbenches with three or four students at each bench. Students all have their heads down and are concentrating on an aspect of their work mostly involving a hammer.
Toolboxes are at various stages of completion. Most students have completed the individual parts of the toolbox and are now in the process of putting all the pieces together. A belt sander runs loudly in the background. The students are intent and focused, keen to finish their toolbox before the two-hour minivan trip back to their school. There is a strong work focus in the workshop; tutor and students are working solidly – the tutor moves from student to student as they call on his expertise or if he recognises they need help. Students want their toolboxes to be finished in time to go home and the tutor wants them to take a well-finished product away with them.

The tutor scans the room and moves towards a table where a student is struggling to remove a bent nail. He stands beside the student and watches briefly for a second, then takes the framework from the student. It is almost impossible to hear each other over the intermittent sounds of the bandsaw and the sander so much instruction is done without words. The tutor instructs the student to hold the frame while he removes the nail. The student watches. He then asks the student to hand him another nail, starts the nail in the correct place and hands the frame back to the student. The tutor waits and watches until the nail is hammered in correctly and moves away.

Students are working up until the last minute, some are at the sander finishing off the edges of their toolbox, some have finished and are looking at the work of others, some are still working hard to finish. Some students just want to finish quickly, some want to perfect a corner or an edge. The tutor manages the balance between the time constraints and quality by instructing some students to go carefully and some to go more quickly. The van arrives to collect the students. It is a long trip home. The students are instructed to stop and gather their belongings. There is a haphazard attempt to tidy the area. The tutor makes sure they haven’t forgotten anything. In a frantic rush the students are gone.

In their speedy exit students have not managed to finish their tidy up and the tutor moves around the space collecting tools and nails. He clears benches, sweeps the floor, locks tools away and prepares the workshop for an industry-sponsored breakfast at 7am the following morning.
An automotive workshop

This is a level 2 automotive course. There are 12 full time students and they are half way through their year-long certificate. There is a range of ages and ethnicities and there is one young woman enrolled in the course. The tutor is recognizable by his blue jacket. All students are wearing full blue overalls and safety boots.

Figure 26. The automotive workshop

Students work at individual benches. Each metal bench has a gearbox at the end of it and a set of tools in the lower tier. Each student has a workbook in front of them with the diagrams and plans that relate to the gearbox they are working on. Their task this afternoon is to build the gearbox from the parts they have been provided with and with the tools they were issued with at the beginning of the course. This task follows learning from the previous day on torque – a significant theory lesson on the physics of momentum.
This is an open space with high ceilings, concrete floor. There are engines and parts of cars on one side of the room. The students and tutor occupy about a quarter of the space. It is noisy. Metal tools clang and echo.

The tutor is working with a small group of students in another part of the workshop. These students have missed parts of the learning needed to complete this task. The tutor finds the appropriate paperwork that each student requires and moves between this task and answering the questions of those attempting the gearbox build.

Students are focussed on their own project but move to discuss ‘sticking points’ with others. Some borrow tools from each other or ask the tutor for a tool they cannot find. Once the small group of students who need more individual attention are provided with their project and are assigned a project bench the tutor moves between individual students as they call him or as he notices that they are stuck. When he notices that there is a problem common to many students, he asks them to put down their tools and calls them together at a single large bench. The students gather around the bench and the tutor carefully goes over the area students are experiencing difficulty with. He questions, explains, checks on understanding and sends the students back to their workbenches.

As students complete the task, he checks their work, asks them questions to check their understanding and then directs them to a small computer room at the back of the workshop. Students complete online tasks or add to their workbooks. The tutor periodically checks this group and works very closely with those who seem to be struggling to make sense of the task.

At the end of the session, the tutor counts in all the tools lent, issues some final reminders about deadlines and the students leave.
The construction site

Twelve students are building a house. They are involved in a myriad of tasks: building walls, the roof, sawing, nailing, some handing tools or materials to others. The tutor circles the house watching as students hammer nails into studs. He discusses with an individual student, the correct way to hold a hammer, “if you hold it like that you’ll damage your elbow”, he explains. Taking the hammer from the student the tutor demonstrates and hands the hammer back to the student. The student alters his grip and the tutor watches for a short time before moving on.

Students are all wearing safety boots and have a builder’s apron. They are all using hand tools. The workshed containing power tools is approximately 300 metres away and some students are using drop saws under the supervision of another tutor.

Three students are on the roof of the frame. One student is perched at the end of a rafter with a handsaw and about to saw the end off a piece of timber. The tutor shouts loudly to the student to shift his weight and reminds him of where to put his weight while using the saw. The tutor tells the student that he has to sand it off, “finish it properly”. A student appears from around the corner and asks what time they are having a break.

One student asks, “Why can’t we use the nail gun?” The tutor replies, “Because then you won’t learn to use a hammer”. The tutor explains to me that using a hammer is one of those ‘basic things’, that “by the time you get out your nail gun out you can nail it”. He acknowledges that although a nail gun is quicker and “speed is important when you’re doing a job and it’s going to rain you need to use a hammer – these guys all need to know how to use a hammer properly”. It is explained to me that the students need to find the right grip on a hammer, need to know how to wield the hammer, get their weight right and hammer in a way that avoids injury to their elbow or shoulder. The tutor suggests that they learn about this by watching, mimicking and practising to find the way that works for them.
The tutor suggests to students that they stop for a break. Some, who have been waiting move off quickly and others slowly put their tools down, take off their aprons and leave for ‘smoko’. The worksite is deserted.

**The fabrication workshop**

There are 12 students in this level 3 fabrication workshop. It is a huge space with welding booths and equipment at one end, metal pressing and cutting equipment in the centre and work benches at the other end. Walls are lined with tools and safety precautions. Students are wearing blue overalls, as is the tutor. Some students are welding, others are cutting metal using specialised equipment and others are shaping, bending, punching and manipulating metal for their brazier project.

![Image of the fabrication workshop](image)

*Figure 27. The fabrication workshop*

The tutor explains to me that in order to make this brazier students have to manage metal in a number of different shapes. The project requires students to use a range of machinery and a series of skills. In the welding bays, some students are catching up on a welding standard they missed the previous week. This is a very noisy space with lots of sharp edges.

I am told that one tutor can supervise up to 20 students at a time carrying out a variety of tasks. This equipment is heavy and dangerous and there are a number of industrial safety
signs in appropriate places of the workshop. There is a strong sense of industry – students are working hard, helping each other out, ‘checking out’ each other’s work.

The tutor suggests that about half of these students will get apprenticeships. The one-year course is like the first year of an apprenticeship he explains, and he describes the work that these students may go to. Some students come in at the beginning of the course hoping “to build helicopters”, some realise it’s not for them and others really enjoy it. The tutor says that “they have to fall in love with it”, but they also “have to have patience”, this kind of work doesn’t have instant results, “it takes a certain kind of person”.

The tutor moves between the different workshop areas as students ask for help. The help he offers is non-intrusive, he stands back, makes a couple of suggestions and other students come along to offer their opinions and ideas.

Students are all at different places in their learning. To an outsider this workshop session seems chaotic. Some students are catching up on earlier projects, some are moving ahead, and some are working together, discussing their project or their plans. It seems some considerable task to manage a group of young people in this space and with this equipment.

‘Smoko’ time

Trade tutors are renowned in polytechnics for their adherence to routines in their breaks. ‘Smoko’ breaks are a time for eating, talking, joking, drinking tea, complaining and comparing notes. This was often a good time for me, as a visitor, to engage with tutors in an environment without the demands, noise or responsibilities of the workshop or other teaching spaces. No smoking takes place but the ‘smoko’ terminology stands.

After some initial suspicion as to my intentions, tutors were interested in this study and over time spoke freely and frankly, keen to provide their opinion on trade-based education and training. Many had been teaching in this environment for more than 10 years and could speak with some experience about how trade teaching and learning had changed over that time.
These conversations over lunch or morning tea included the big picture view of policy related concerns as well as the minutiae of the everyday work of a trade tutor. The overwhelming majority of tutors in all the many visits I made to the ‘smoko’ room, classroom, workshop or work site took their role seriously and spoke with confidence about teaching in their discipline. They were happy to tell me how they taught and made a number of invitations to visit them in their workshops.

Tutors had clear ideas about why people came to polytechnic to learn a trade. Tutors suggested that it was to learn “how to do things properly” or to get a “broad training” in all aspects of a trade. Indeed, one of the most important things for young pre-trade and trade students is to get it right: “do it once and do it right”. “You come to polytech to learn how to do it the right way.”

Tutors tended to agree that teaching young people in a full-time trade-related course was challenging, particularly in the pre-trade environment. One tutor suggested that the task of the tutor is to engage young people early, “we have to give them a taste of success in their first assessment,” he also acknowledged that this had to be balanced with the requirement to keep standards high. Tutors suggested that the idea of a tiered system of trades was a possible solution to concerns relating to engagement, ability, and equity. This would mean lower requirements for some areas of trade training, and job opportunities for those who had trained in that area. Those wanting to be a fully certified tradesperson could complete the full course.

Tutors agreed that trade tutors are role models and that their presence is influential for young people. There was a suggestion that the trade tutor is a stabilising influence on some students. There was agreement that back-up and support for tutors was important for the success of any trade-related course.

In terms of the apprenticeship system, a tutor nearing retirement said that the former apprenticeship system was one that everyone believed in: “Employers believed in it”. Young people were taught to work and the structure was tight, whereas “now we have a dual system” and “today, no-one believes in it”. Some people are trained through
industry training, others come to polytech and there is a bit of a ‘hotch-potch’. This tutor went on to suggest that, some students are left wasting a lot of money on course fees with no employment prospects at the end of their training. This concern was a common theme in discussions with tutors.

When discussing the vexing question of identity and teaching, a question I spent some time on early in the study when I struggled with titles for this work, a tutor suggested that “we’ve done our trade and we’re teaching our trade but we’re different to teachers”. A senior tutor suggested that the world of trade education has always managed dual identities: “the trade world we come from and the educational world we take in”. The truth is that trade histories include training and “managing apprentices, teaching people what we know is part of being a tradesman”.

Another tutor suggested that the advantage of undertaking trade training in a trade in a polytechnic is that working with young people is something they are good at: “We’re used to young people – we’re used to tearaways”. This was supported by another tutor who said “that’s because we were tearaways ourselves”.

Chapter 9. Summary discussion

The last three chapters have provided insight into the world and work of trade tutors working in New Zealand polytechnics at this time. The study has revealed that within this constantly changing sector there is a strong trade and teaching identity and an understanding of the complexities, tensions and needs of a sound and robust training and education sector. Nevertheless, as highlighted earlier, tertiary trade tutors are rarely referred to and the work of trade teaching is little discussed in the wider trade education/industry training dialogue. These interviews and conversations were one of the few opportunities that tutors had to discuss the bigger picture of trade training from their perspective.

The work of teaching and tutors in the sector remains invisible and the voice of trade teachers remains silent. The Tertiary Education Strategy (2014-2019) identifies skill acquisition for industry, careers for ‘at-risk young people’, the boosting of Maori and Pasifika achievement and the improvement of adult literacy and numeracy as priorities (Ministry of Education, 2014, p. 1). Vocational education and training is identified as having a lead role in the delivery of skills needed by industry (p. 20). Trade educators are not mentioned as components in the development of high quality trade skills. Yet such skill development can occur only through the continued work of skilled tutors engaged in high quality teaching. Just what high quality trade teaching is and how it occurs is little considered.

In Chapter One I presented a picture of trade education as surrounded by a complex ‘swirl’. Trade education is represented at the centre of a range of economic, social and political demands. Within that swirl the work of the trade teacher is under-represented, under-acknowledged and under-theorised. I attempted to organise the ‘swirl’ and make sense of the demands by applying the idea of the ‘Governance Grid’ (Robertson et al., 2002) as a way to organise, but also explain, the complexity and contestability in the sector. The chapter provided an overview of the economic, social and political background that has given shape to the current funding, ownership, provision and regulation of trade-related vocational education and training in New Zealand.
Chapter Two provided a background to the key players in the current trade training environment and considered the policy and reform environment within which trade education is nestled. Highlighted in this chapter was the pressure on tertiary teachers to respond to a complex swirl of demands, most especially the increased demand for more effective VET provision through quality teaching. The chapter highlighted the demands on tertiary trade teachers to provide training to fill the skills gap, ‘fix’ educational outcomes, provide literacy and numeracy skills, and deliver social development requirements while still providing relief for increased skill requirements in many areas of industry. Further outlined in this chapter is the lack of useful and relevant training and development opportunities for teachers in this sector to undertake the vast range of tasks associated with their work. I also outlined the lack of research and knowledge we have for trade-based skill and knowledge acquisition and the lack of recognition of trade teacher discipline-based understandings.

Chapter Three provided a history, or ‘whakapapa’, for our current trade teaching situation. Having asked ‘What is Vocational Education and Training in New Zealand?’ I traversed the history of the New Zealand VET system and suggested that much of the current ‘swirl’ is related to the displacement of VET, the lack of long-term, policy-based planning, stakeholder agreement and the lack of recognition for vocational education as a significant and important educational space separate from schooling, industry and university. This chapter highlighted that the current environment, which includes the quick-fix basis of trade and vocational education in New Zealand, is not new.

In Chapter Four I identified the lack of independent research by, and for, VET teaching practitioners in New Zealand, and the subsequent limited understanding of discipline based pedagogical models in vocational education. The idea emerged that the work of the trade tutor is precarious and boundaryless and occurs in a space contested by many. This is a space that has not been claimed by the trade teacher. It seems to float between industry training, government-based priorities and an extension of the school system to capture NEETs.

Chapter Four also considered the vast literature relating to quality teaching and identified the literature on professional learning in the compulsory sector, the further education
environment and in vocational education. As well as identifying some of the barriers and difficulties associated with teacher professional learning, common and key aspects relevant for teachers in the VET sector were documented.

The methods and methodologies chapter (Chapter Five) provided a background to the theoretical underpinnings for this research. In this chapter I described the experience of researching in this sector as like working through a series of layers. I explained that the methods selected supported a layered approach as a way to make sense of this complicated field. I outlined the methods used to work through and expose the layers. This chapter also outlined the reasons for selecting the approaches and the purpose of the research, which was to give some voice to a relatively silent workforce.

An account and description of the data gathering involved in this study was outlined in Chapter Six with a particular emphasis on the constructs or models developed in focus groups. The way in which the findings from the first focus group shaped the second focus group and the subsequent interviews was outlined.

Chapter Seven brought together the main findings from the interviews. These are presented as key themes that emerged from the interviews, which thus formed the sub-headings for each section of the chapter. Tutors’ own responses were provided in this chapter.

Chapter Eight provided an account of the fieldwork undertaken. I described the experience of ‘crossing the threshold’ into an unfamiliar educative space and illustrated my observations of the teaching experiences as they occurred in a number of workshops and on a building site. These experiences gave rise to the notion that learning and teaching spaces in vocational education arise from the industry or trade background in which the learning is embedded and are often very different from traditional learning spaces in tertiary education organisations. It follows that the approaches we take in working with those that occupy such spaces must also follow less-known methods.

As previously outlined, the study brought together data from a number of formal and informal discussions in a variety of settings which included the testing of ideas through
perception checks, discussions during visits to workspaces and workshops, and conversations in response to interview transcripts provided to participants and the models they developed. These discussions were important strongholds as I went through the layers of research.

This research has involved vocational trade educators and tutors who were canvassed for their views on the purpose of vocational education and the work of the vocational educator. Trade tutors were invited to discuss their views on their work, their background, and ways of teaching and learning. Their constructs, explained in Chapter Six, as models of their perspectives on learning within their discipline highlight the connection between teaching and identity. In this final chapter I will spend some time discussing the notion of identity and draw on Shulman’s work to characterise the work of trade teaching. I will also consider the idea of signature pedagogies as an entry point to ‘bridge’ identities and support the transition from tradesperson to polytechnic trade teacher.

The study has revealed that trade teachers have strong occupational identities as teachers of their trade but lack a strong occupational identity as a group of trade tutors. Their work is what Seddon would characterise as ‘disturbed work’ (Seddon, 2008), where there is a lack of certainty, constant change and an unease about where the future of that work is going. This is work that occurs on the boundaries.

Given the complexity of the VET environment, as identified in Chapter One and Chapter Two, and the long history of demands and contestation of the vocational education and trade training space, as outlined in Chapter Three, the notion that the work of the trade teacher is disturbed is not surprising. Tutors themselves expressed unease with the constant and ongoing change in their environment. Constructing an occupational identity within an environment of unease takes some considerable determination and support.

Trade tutors discussed the complexity of the role and the tensions associated with managing the multiple relationships and roles within their work. The tensions and ambiguities relating to qualifications and educative experiences, learning and assessment,
employers and training were borne out in the interviews. Trade tutors are fully cognisant of the difficulties and complexities they face.

It became increasingly clear throughout this study that the voices of trade tutors and teachers in the VET system in New Zealand are virtually silent, their knowledge is rarely accessed and their opinions little sought. Invisible in policy papers, they are more like to be researched than to research. We could assume that trade-related skills and knowledge are learnt by novices in a vacuum; delivered by anonymous and unidentified instruments of industry, policy, NZQA and standard-setting bodies rather than by autonomous teachers and tutors with clear and defensible views on learning and teaching, curriculum, content, assessment and delivery methods.

Interviews and discussions pointed to trade-related notions of how learning occurs by active demonstration and guided practice, through trial and error, and with guidance and encouragement. It was also noted that tutors’ views on the pace and organisation of learning over a qualification does not fit easily into a formal qualification progression prevalent in a polytechnic or via unit standard approaches. Tutors considered that the complexity of learning within a trade and the difficulty of much of the content are often not recognised. Certainly, conventional ideas about what constitutes good teaching in a polytechnic do not necessarily fit easily where skill acquisition takes time and is identified as a trained practice learned by repetition.

The problem this research uncovered is that tertiary trade teachers are often obliged to adhere to concepts of teaching and learning that are inconsistent with their own concepts of how learning occurs. They are required to fit the learning of their trade into a system that treats learning as modular, semesterised and chunked. For those trained in a time-served model, semesters, unit standards and national certificates are disconnected and without clearly identifiable gradations between trained and untrained. Standards and competencies are in direct contrast to the idea of the mastery of a skill and the socially situated development of a tradesperson. These ideas about learning, teaching and qualification progression are often in conflict with the ways institutions organise learning. In order to work in meaningful ways and without conflict, trade teachers may adapt institutional structures to fit their own understandings, or they may continue to
work in their own way regardless of institutional structures or requirements. Their teaching work may become clandestine. This results in a ‘silent’ workforce, unable to discuss their understandings of learning and where trade teaching practice remains invisible undertaken by a teaching workforce that lacks validation by the wider VET teaching environment.

This research has illuminated the work of tertiary trade teachers and has provided some awareness of this world of work as separate from both industry training and ‘polytechnic lecturer’. The study suggests that most trade tutors are keen to pass on trade skills through high quality teaching. The discussions with tutors in the study also suggest that tutors have strong understandings and beliefs about what constitutes good learning in their trade. However, the structures and processes in polytechnics that restrict tutors or deny their own trade teaching knowledge force them to relinquish or adapt their teaching beliefs and/or practices to work within an institutional environment. These questions remain: how much can be relinquished or adapted before the essence of trade education is compromised? Can trade education be adapted to fit organisational processes yet remain recognisably trade training and education? How can exemplary models of trade practice undertaken in polytechnics be developed for trade education?

There is an impasse. Often in polytechnics, trade tutors are known for their unwillingness to engage in traditional teacher development or training programmes. Their aversion to educational theory is documented (Leach, 2011). There are also suggestions that the trade teaching workforce in polytechnics can demonstrate ingrained and ‘old fashioned’ teaching and trade practices and that trade tutors can be resistant to change.

While the ‘hunker-down’ approach can be a result of a sense of lack in occupational legitimisation in the institutional environment, we also know that the trade arena in New Zealand requires trade teaching for a future trade workforce for twenty-first century New Zealand – responsive, innovative and flexible. An overriding question raised through this research is how then can we work with trade discipline experts in a way which allows for and encourages both the retention of a trade identity, yet allows for the development or widening of that identity to include teaching in a polytechnic? It is not about asking trade tutors to be something different, moreover, it is about asking them to expand what they
know. Can modern trade teaching practices conform to institutional requirements and continue to honour trade practices and identities?

Good skill outcomes and high educational quality arise from good teaching. However, we know that good teaching in polytechnics does not happen without deliberate planning and support. Yet trade tutors are often disconnected from the planning and preparation aspects of curriculum and assessment. The disconnection between development of curriculum and the delivery, the writing of assessments and their undertaking is problematic. In order to reconnect tutors, it is necessary to provide them with a view of the whole and allow them the opportunity to understand and be a part of institutional processes and procedures and part of the wider decision-making processes relating to their discipline.

Good tradespeople are the result of good training and whole learning experiences in their particular discipline. Tutors described the importance for their own students to see the whole process. Trade tutors outlined their concerns about the de-skilling of their trades through the introduction of disembodied chunks of learning as well as the move in industry to train in specific skills at the expense of broader trade-based skill and knowledge.

Chunking and dividing into strands can be seen through these interviews to have repercussions both for industry and for education. In a de-skilled environment, individual skills are split up or ‘divided into strands’ each strand deliverable by one individual or group of individuals. In education there is a tendency to separate curriculum writing, resource development, programme development, delivery, assessment and moderation into different strands undertaken by different people often in different organisations. Polytechnic-based teaching programmes are planned, programmed and assessed through processes that trade teachers have often not had any part of.

Trade tutors interviewed recognized that the skills of problem solving, or ‘the ability to work out problems and fix them’, were important for students and employers. However, they recognised that in order to problem solve, a wide understanding or overview of the complex processes and sequences that make up an operation is required. Without a
broad knowledge of the trade and an understanding of how different aspects of the trade fit into the big picture, the ability to identify, manage and fix problems is limited. Hence, the unease of tutors whose goal is preparing high quality tradespeople for industry, and the implausibility of a trade tutor providing high quality education when strands are separated out and they are removed from the whole experience of the processes that make up their work.

This thesis has made a case for trade teachers and trade teaching and for: a) the increased recognition of them as educators in VET in New Zealand; b) the acknowledgement that teacher training and professional learning is a vital component for good vocational teaching; and c) that trade-based VET teaching in New Zealand is in need of models which relate to practitioners’ own known understandings of learning and skill acquisition.

A case for teachers and teacher training in VET

Currently, the professional practice of teaching is being called into question. The teaching profession in New Zealand is trending towards a more deregulated approach to teaching in the compulsory sector through the introduction of charter schools in which teachers are not required to have teacher training, registration or certification. This is representative of the view that anyone can teach, and that the delivery of a curriculum often provided by someone else is all that is required for learning to occur. At a time when there are calls within the Australian VET system for better and more rigorous training and certification and tighter regulation for teachers, the New Zealand VET environment is yet to introduce any compulsory certification or training. However, TEC have signalled some compulsory minimal ‘literacy and numeracy’ training requirements for those teaching Youth Guarantee and level 1 and 2 for 2015.

The OECD (2010), in its key findings for effective VET systems, suggests that effective teachers and trainers are important to both on-job and off-job teaching and learning environments. The report acknowledges that there is often a lack of preparation provided to vocational educators and suggests that preparation in how to teach has been shown to
have positive outcomes (p. 96). The promotion of training and qualifications in education and training for VET teachers is explicit in this report.

The OECD report suggests that the improvement of teaching in the VET sector is reliant on the development of routes into the teaching profession from industry, opportunities for VET tutors to work temporarily in industry to update their vocational knowledge and competencies, the provision of flexible pedagogical training to suit all aspects of vocational education and training and the development of flexible career pathways between industry and the training profession in VET institutions. Minimum standards of trainer preparation are recommended (OECD, 2010, pp. 96-99).

It is clear that there is a need for good teachers and trainers. However the low status, low pay and lack of connection between tradespeople or industry practitioners and institutional environments presents problems.

It is important that we do not approach the preparation of educators in the vocational sector with a ‘quick fix’ solution or as merely an opportunity to equip trade practitioners with a basic set of skills and competencies around delivery and assessment. The danger is to limit and simplify vocational education into instrumentalist teaching competencies, so as to minimise its importance and remove the autonomy and expertise of those involved in teaching. As warned by Seddon (2008) there are ‘cultural consequences’ which threaten innovation to the provision of disembodied competencies and standards that promote skills to the exclusion of strategic thinking and critical analysis.

As identified by the trade tutors interviewed, problem solving, critical awareness, confidence and initiative are among the most important competencies that employers require in new trade employees. Alongside the learning of skills, learning which promotes such competencies are embedded in the knowledge and skills of the tutor to question, guide and develop thinking beyond standards and competencies. Autonomous, agentic teachers who plan learning that has elements of critical debate and problem solving must engage in such activities in their own working lives.
Fast changing requirements in an industry-led ‘flexible’ environment requires workers who are adaptable. Indeed, twenty-first century learners, capable of innovation, new ideas, critical thinking, creativity and adaptation to competitive challenges and new markets as outlined in the Tertiary Education Strategy 2014-2019 require instruction and coaching by those already engaging in such practices. This poses a challenge to polytechnics and VET teacher education programmes.

Trade educators undertake their work on the boundaries of formalized education (Ferguson & Seddon, 2010). This is a workforce often seen as the servant of industry and the state, or as intermediaries between skills and students who provide a quick fix solution to a current skills gap or labour shortage. This thesis, which seeks to uncover the work and perspectives of trade teachers in New Zealand, was designed to provide better information on the role and thus a clearer understanding of the kinds of teacher training that will be relevant, appropriate and which promotes innovation. However, standards of conduct and lists of qualities or ‘how to’ guides relevant to the task of delivery do not encompass the realities of the trade-teaching role itself nor do they provide opportunities for emerging educators to critique, analyse or problem solve in their area of expertise, nor do they take teaching and learning in the trade arena forward into an innovative educational future.

How we conceptualise trade teachers and their role dictates how we will approach the education and training environment for their development as teachers. This, as outlined in Chapter Four, is difficult due to the complexities of the role and the environment, and adequately identifying what a trade teacher does, and is, cannot fit neatly into a traditional view of teaching. It is tempting to provide a list of skill requirements. This chapter discusses the notion of identity and offers a re-conceptualisation of the trade educator.
Identity and pedagogy

The notion of identity and its relevance to tertiary trade teaching is explored in Chapter Four and is further highlighted in the findings of this research. To summarise, trade tutors arrive to the teaching profession with a strong professional or trade identity. Often they have been involved with apprentices or trainees in their industry-based roles and so, training others in their trade exists as a component of their trade identity. As tutors employed in polytechnics they will usually augment their emergent teaching identity with their discipline expertise identity – not just tutors but building tutors or mechanical tutors. In general, tutors are reluctant to call themselves teachers and will tag the teaching term with their trade. This identifies them more fully.

Compelling evidence for this teaching-trade identity is seen in the images from the data-gathering exercises outlined in Chapter Six, where artefacts relating to teaching and learning were strongly influenced by the discipline and mediated by discipline-based understandings. These meaning-making artefacts as cultural representations of their work were the framework for tutors’ theories of learning, and strongly symbolic of their trade. The evidence for the link between identity and pedagogy is clear.

Some tutors can pinpoint a particular time when they were able to say they became teachers or educators. They suggested that a shift in identity occurred either through teacher training that gave an understanding of teaching, or through mixing with people from an educational world different to their own trade world. For one tutor it was when he read about his own work following publication of the pilot study for this research in a New Zealand teachers’ journal. It is by standing back from their work as trade tutors that they can view it most clearly and this is a strong case for teacher training that provides opportunities for discussion and deliberation on their role.

Furthermore, those tutors who appeared to have made a shift from trade expert to trade teacher could readily identify when that shift occurred. Such trade tutors understood their work as an occupation sitting on the boundary of two worlds. These tutors are able to walk in both worlds – the trade expert and the trade teacher expert – with confidence.
The problem, as identified earlier in this chapter, is that a trade identity can clash with a teacher or tutor identity. Some trade tutors, in their rejection of the word ‘teacher’ and the augmentation of the term ‘tutor’ with their discipline, exempt themselves from teaching initiatives, teacher development and teacher-based projects. In this way they identify themselves more by what they are not, than by what they are. This is likely because their current world of work is broad, complex, unstable and unwieldy, and they have not been provided with opportunities to fully understand how it works as a whole.

The dilemma for trade tutors is twofold. Firstly, there has not been a way to identify as a teacher that does not challenge conceptions of learning a trade, and secondly, the occupational identity of trade tutors as a collective workforce is indistinct.

Seddon (2008) suggests that occupational identity comes from a certainty, where a person is confident that they have the skills and knowledge necessary, can access new knowledge within the zone, and can understand the way new knowledge is made within that zone. An occupational identity is one where the individual can function well and operate confident in the knowledge that they know how to negotiate the different aspects of the world. They can ‘speak’ the language associated with that world and can operate across the spectra that make up that world. A trade teacher within their trade knows the rules of engagement; in this zone they have a high level of expertise.

On the other hand, the rules and cultural practices within an educational organisation can be obscure, complex and multi-layered, as suggested through this thesis. It takes time to become confident in the polytechnic VET space and to acquire the necessary knowledge and skills to function confidently. Furthermore when much curriculum, resource development, assessment development and programme development occurs separately from educators themselves, there is little opportunity to gain access to this knowledge and the mechanisms of the work remain opaque. This is an uncertain occupational space for trade tutors. The zone may present seemingly unsolvable problems especially when approached from a different occupational and cultural space which functions with a different set of beliefs and practices.
Occupational identity is connected to a collective understanding of purpose and, according to Seddon (2008), is a vital part of innovation. Currently, industry and market models dominate notions of trade and vocational education. This is not enough to provide a basis for a collective notion of a trade-based teacher. In order to innovate in this new era of trade and vocational education, notions of purpose and function for trade education must come from the tutors themselves as a collective understanding of the work they do. The ability to develop common and collective understandings of their work and to clearly articulate them is a first step.

Tutors who make the identity shift from tradesperson to teaching tradesperson more readily make new knowledge in the teaching of their discipline since they are both teacher and discipline expert. Their conceptions about teaching their trade contribute to the knowledge about teaching and learning in general. Successful identity transition, however, is unlikely to happen without a concerted effort on the part of those involved in teacher education and the trade teachers themselves.

The problem for teacher trainers or professional developers in polytechnics is that there appears to be very little understanding of the importance of identity development. Teacher educators will tend to have a different identity from the trade tutors or tradespeople they are working with and will thus find it difficult to encourage or facilitate the development of teaching identities so different to their own.

The task, however, for any trade teacher development is to provide a pathway for the move between occupational spaces and thus the opportunity for trade tutors to incorporate their teaching identity into their existing area of expertise. The question is: how we can expect trade teachers themselves to identify as a teaching workforce and thus provide innovative solutions to learning and teaching problems if we are not in a position to provide a basis for that identity?

What we do is important. If the trade-teaching workforce remains a researched workforce instead of a research workforce, is invisible or seen to be in need of ‘fixing’, and is identified as a passive source of knowledge and skills providing rapid upskilling programmes for the benefit of employers and for economic advantage, then the value and
worth of their work as a teaching workforce will remain low. Without a radical change to teacher training programmes, trade tutors’ status in teaching will continue to be seen as deficient and trade teaching development and educative understandings relating to experiential and trade-based teaching in polytechnic environments will remain hobbled.

It is relevant that the way we conceptualize the role of the vocational trade teacher forms the basis for the development of teacher education or professional learning programmes. If we identify the work of vocational educators as more complex than the transmission of existing skills and knowledge to units of labour for a ready-to-go workforce and rather see an agentic workforce able to make learning and teaching decisions, then the work of teacher education and development is more complex than the training of skills in the processes for delivery of pre-developed curriculum and assessment tasks.

A way through: Re-conceptualising the teaching tradesperson and their pedagogical approach

A three-dimensional educator

As outlined earlier in this thesis, the trade tutor undertakes multiple roles, often in multiple sites. Tutors work with young people who are preparing for industry roles, industry practitioners who are upskilling, young people who have become disengaged from schooling and those who may be unemployed. The work is governed by multiple stakeholders including the Ministry of Education, the Tertiary Education Commission, the Ministry of Employment and Business Innovation, the Ministry of Social Development, the New Zealand Qualifications Authority, industry groups and Industry Training Organisations as well as the organisations and employment contracts under which they are employed. Trade tutors have multiple titles and manage a range of student types, and not all students aspire to their trade. Trade educators develop and maintain multiple relationships.

In Chapter Four, I made reference to the idea that in order to develop good teacher education it was first necessary to accurately characterise the work of the teacher. As
suggested by Figgis (2009), undertaking a characterisation that accounts for such a complex role is not straightforward. However, according to Hatton (1998) it is necessary.

Despite the difficulties, I suggest that by characterising the roles of the trade educator, new identities can emerge and, as Peter Kell (2004) has suggested the challenge for vocational education, “is to create new notions of professional identity that respond to a new set of education challenges in new times that move beyond a reductionist and instrumental view of teaching and practice” (p. 3).

Outlined below is a characterization of the trade tutor in their multifarious roles. The conceptualisation is a view of the trade tutor as an agentic and autonomous trade expert educator responsible for all aspects of the work involved in ‘passing on’ their discipline. It is thus not representative of all trade tutors in all roles at the current time. Rather it embodies an aspirational account for trade tutor practitioners.

The threefold characterisation of: 1) the ‘bricoleur’, 2) the ‘engineer’, and 3) the ‘kaitiaki’, represent individual parts of a single entity. These individual parts are closely related to those outlined by Shulman (2005a) who describes the “three fundamental dimensions of professional work – to think, to perform and to act with integrity” (p. 52) as the “habits of the hand”, “habits of the mind” and “habits of the heart” (p. 59) and are gleaned from the interviews and discussions with tutors. Like pieces in a puzzle they make up the work undertaken in the trade tutors’ work and world.

By conceptualizing the trade tutor in a multi-dimensional way the realities of their work are adequately characterized and can be more fully described. The description is a starting point for considering the transition from trade practitioners to trade teaching practitioners and can form a basis for a pedagogy for trade tutor education.

**The bricoleur**

The idea of the bricoleur relates to the collection and use of skills as they come to hand. The concept of a bricoleur is compared to a “jack of all trades”, “adept at performing a large number of diverse tasks” (Strauss, 1962, p. 11) and is conceived by Strauss as the
description of a person who is involved in the act of ‘bricolage’ (Hatton, 2009). Bricolage is the act of utilizing the tools and materials available to carry out the work at hand.

A trade teacher with expert discipline knowledge gathers teaching skills in an informal and often unplanned way, as they are needed. Teaching skills are generally based on what they already know. These skills will usually solve short-term teaching problems and such tools are often randomly applied as needed, gathered from a variety of sources and fill a specific need. The bricoleur requires quick and ready responses to immediate problems of teaching which relate to what they already know. Bricoleurs need skills that they can use instantaneously.

Hatton (1988) discusses the idea of the teacher as a bricoleur where teachers use strategies and tools collected in a random and unplanned way to be used as the need arises; they are rearranged, or reorganized in response to the immediate environment. Bricoleurs are inventive and skilled at finding short-term solutions to problems. They seek tips or advice to add to their repertoire and their toolboxes grow as they add to the tools acquired.

The tutor as bricoleur uses teaching tools conducive to trade-based learning. This allows them to pass on information in immediate ways and to manage a group of people where physical safety concerns are often very important. They engage with students in the area of skill and knowledge development ‘on-the-hop’, at the construction site, in the workshop and in the classroom. They know the ‘tricks of the trade’ as well as the tricks of teaching.

**The engineer**

Engineers plan, design and modify; they develop new tools to solve problems. The teacher as engineer identifies the constraints within which they work and builds solutions (Scribner, 2003). Unlike the bricoleur, who may reconstitute the tools that are at hand, the engineer may redesign tools or develop new ones. Concepts and theories compel the engineer, this is more often the work of the ‘head’.
The systematic planning, development and execution of the curriculum necessitates a framework for problem solving. Trade teachers involved with the curriculum and, by extension, the course material that they teach, deliberately engineer the curriculum to meet the demands of the discipline and the organizational and qualification-based requirements.

In interviews trade tutors discussed the concerns of the engineer; the order in which learning takes place and how learning is best organized over time for their trade. The pace, rate and cohesion of teaching and assessment were discussed as well as how standards are integrated. Engineers need to know how something operates and what is required in order to work effectively.

As engineers, trade tutors respond in a methodical way to their work. They identify possible problems, plan, contextualize designs and adapt their environment to fit new ideas and new concepts. Teachers here engage in a “theoretically grounded approach to learning” (Scribner, 2003, p. 4) which is planned and long term. Such a teacher engineers a learning environment and plans for teaching in a systematic and tested way. Engineers work within a framework and develop solutions for needed products or processes. The engineer will find new and more efficient ways of doing things in a planned and deliberate way. This is the work of the trade tutor as a theorist and designer able to shape their educational environment.

The kaitiaki

Trade tutors in this study described the interconnectedness of their discipline to other disciplines and to the wider world of work. A number of tutors put forward the idea that there is value in their work that lives on after they have completed it. It is in this way that Sennett (2009) describes the ‘spirit’ of a work. This is the idea of culture within a discipline, the consciousness of its own value in terms of what it provides to the greater picture (Sennett, xxx). This idea is incorporated into the conceptualisation of the trade teacher alongside the work of the ‘heart’ outlined by Shulman (2005a). For this third aspect I have used the Maori term ‘kaitiaki’.
A kaitiaki is a guardian, caregiver, protector and preserver. A kaitiaki can also be a messenger (Barlow, 1991) linking worlds together through the messages that it provides. A kaitiaki is a guide. The messenger provides signs to prompt parties into action and thereby ensures that a resource is being treated with the appropriate care and carefulness. A kaitiaki as messenger will issue warnings to signal where proper procedures are not being followed or where there is risk to the community. The interests and safety of the community are foremost.

Kaitiaki is a term and concept occasionally used in education to describe the work of teaching as one of stewardship where the safety and well-being of those in the care of the educator or leader are foremost. The term is also used in the field of conservation and the environment. Here, the management of resources comes under the care and responsibility of a group of people who understand the value of that resource to the people within the wider environment as well as of and for its own sake. They understand the nuances and characteristics of that resource.

Kaitiakitanga (the act of kaitiaki) implies responsibilities and obligations to ensure the safety and protection of others as well as protecting the knowledge held in a particular place. The kaitiaki has an obligation to ensure safe passage for those embarking on a pathway through that environment.

The understanding of tensions in their work and the way tutors discussed the navigation and negotiation of these demonstrates in part the demands on the wisdom of the tutor as kaitiaki to plot and steer a course and deliver those in their care safely to their destination.

The kaitiaki is concerned with the interests of a particular environment and with those who occupy the environment, particularly those who are new or do not have the knowledge or skill within that environment. In this way the trade tutor has a care for the trade discipline itself, the space in which the trade occurs and for the people in and around that space. The kaitaiki has concern for the consequences of the work. The kaitiaki understands the world he or she occupies, the rules and boundaries of that space,
how to keep the environment alive and regenerating and how to guide people on the correct way to conduct themselves through that space. They are a link from one world to another.

Amiria O’Malley (in conversation, July 2014) described the idea of kaitiaki as: ‘ti’ as a light and ‘aki’ as to build or keep alive, so kaitiaki as that which describes the light or fire in one’s belly which is built and kept burning. In educational terms, it is to keep that light alive throughout the learning experience. In trade terms, it is to keep the trade alive by passing it on.

The role of the trade tutor in his or her work with novices as a role that constitutes the care and concern for the development of that novice within the context and the wider world is the role of the kaitiaki. The kaitiaki in this context ensures safe passage for the novice and also safeguards the values, skills, knowledge and traditions associated with that trade. Kaitiakitanga is that which sets the educator apart from the trainer.

The trade tutor as kaitiaki emerged through the interviews when tutors discussed the lives and the development of young people in their care beyond trade-based skills and knowledge, the idea is strongly evident in the models that tutors constructed where learning, tutor, student are wrapped up together in the discipline. Tutors spoke often and knowingly about preparing young people for a wider world. Their work as kaitiaki defines this important educational work where tutors have some sense of responsibility for the development of the student beyond the functional skills of the trade. The awareness and of the life worlds of students, the protection of their well-being while they are in their care as well as the life and future preservation of their trade discipline is the awareness and work of the kaitiaki.

The concept of the trade tutor as having a multi-faceted identity as bricoleur, engineer and kaitiaki is weighty and speaks to the importance of the trade tutor as a skilled teaching practitioner, designer and theorist, mentor and guide. It has been garnered from the research here and characterizes the different aspects of the work of the trade teacher in a VET polytechnic context. While it may not capture every nuance of the work of the trade teacher, it provides a theoretical base for working with identity expansion in an
educational setting. The characterisation allows for the role to be presented as complex and multi-faceted and one that requires multiple skills, abilities, knowledge and capacities, wisdom, understanding and patience.

The characterisation challenges the notion that the requirements of a vocational trade education workforce is to deliver modularized, pre-prepared standards in semesterised segments, assessed against competencies which fit into a framework for learning.

Certainly discipline experts who are in the process of becoming discipline-specific tutors are required to conceptualise their roles in a way that is different from the idea of what they were as trade practitioners. Theorising the work as multi-dimensional and the educator as multi-faceted is an important step in the development of an identity that recognises the complexity of the work of a vocational trade educator.

This conceptualisation coupled with recognition of signature pedagogies provides a starting point for trade teaching professionals to be identified as more than skill developers for industry. In order, however, for signature pedagogies to be useful for a modern trade-based educator there requires some development beyond a description of what exists.

**The challenge of signature pedagogies**

The idea that the learning of a discipline is a threefold apprenticeship, forming habits of the hand, mind and heart as outlined by Shulman (2005a), emphasises the notion that the work of a vocational educator is more than can be summarized in a list of skills and dispositions. In fact, applying the idea of signature pedagogies with a conceptualisation of a multi-faceted practitioner involved in multi-dimensional work may help advance the development of trade-teacher identity beyond current competency-based conceptions.

Beginning with a known pedagogy which has a long tradition in the trade environment for skill building and is best described as active demonstration, guided practice and independent practice is helpful. Trade tutors pointed to this approach in interviews. This pedagogical approach of reproduction and imitation, a signature for skill building in trade training is, however, limiting. To move beyond a pedagogy of reproduction and imitation
to one that provides opportunity for innovation in a changing and challenging world is
difficult.

Trade tutors embedded in their trade and the pedagogy of imitation can be resistant to
considering alternatives. We know that tradespeople identify first with their trade when
they suggest that teaching is what they ‘do’ but the trade is what they ‘are’. This was
borne out in some interviews where tutors stated, “I work as a teacher but I am a
mechanic.” The problem is that when trade tutors identify as ‘tradespeople’ they give
themselves an internalised exemption from teaching initiatives – teaching culture is for
teachers. Their acts of resistance (Willis, 1977) are also entrenched in their cultural
practices evident in the pedagogies passed on and reinforced in the work that they do.

However, trade practices have changed and continue to change. The current conditions of
work are different to those that were apparent when particular trade-based pedagogical
approaches emerged. Educational demands inherent in trade teaching have also changed
markedly. Work in the twenty-first century world has less certainty than in previous eras;
equipment is constantly changing, techniques, tools and materials are regularly updated,
regulations change and workplaces are constantly undergoing transformation. The work
of a tradesperson is more complex and less constant than in the old sense of a trade or
profession where tradespeople ‘do’ and professionals ‘think’.

Tradespeople are required to adapt to new tools and methods, mechanics to be able to
accurately use, read and analyse results of diagnostic equipment (where they are more
likely to be called technicians than mechanics) carpenters manage new and untried
materials on complex sites with experimental architect/owner demands. Plumbers,
fabricators, electricians and boat builders are working in ways and with materials that
were not adapted to, or learnt about, through a pedagogy of reproduction and imitation.

**Resistance and signature pedagogies**

Challenging a pedagogical approach, especially when it is linked to identity, can be very
difficult. A challenge is often met with resistance. Yet the resistance is not simply
obstinacy or just the refusal to be identified as a teacher. Within a trade, the tradesperson
has formed an identity that is linked to the particular conditions and constructs of that trade and how it has perpetuated within the social and structural conditions within which it has existed. Paul Willis (2000) suggests that cultural practices respond to and make sense of ‘structural conditions’.

Such structural conditions are a response to and a result of a particular approach to functioning confidently within the trade. They are part of the conditions that an apprentice or novice eventually learns to negotiate and navigate to a high level of proficiency. However, as a particular cultural form, discipline-specific pedagogies can provide a platform for the formation of identity in the teaching and learning environment.

For trade tutors, a signature pedagogy will describe particular teaching practices which are recognisable and that reflect the cultural practices with which they are familiar. It is an outwardly visible cultural practice which cannot be easily separated from those who engage in it. A signature pedagogy does not stand on its own: it is deeply connected to the culture from which it has emerged, the conditions within which that culture is immersed.

Paul Willis (1977) explores the idea of ‘resistance’ in his work on the ‘counter-school’ culture of working-class boys. Resistance is an explanation for the reaction against the schooling system that prepares the ‘lads’ for a future of manual labour and as a cultural form that is resistant to change. Willis refers to resistance as a “way of holding off or invalidating prescribed models of how you should act, feel and be in relation to structures” (p. 121).

Resistance, therefore, as a direct result of historical structural conditions, acts as a demarcation for identity and provides an explanation for the fact that trade tutors are reluctant to identify as teachers and reluctant to consider pedagogical approaches that might differ to their own understandings. As a result, pedagogies for trades may not have evolved in response to the changing conditions of teaching in a polytechnic-structured environment.

A signature pedagogy in the trade can be seen as a particular cultural practice which has
emerged from the cultural environment of that trade and the context within which that trade has operated over time. The value is that it can provide an opportunity for a broader exploration of pedagogies of the discipline beyond the traditional and move trade understandings into educational understandings.

Working with resistance is the work of the teacher educator and requires acknowledgement of the agentic and multi-dimensional individual undergoing a possible cultural crisis. As outlined in Chapter Four, the identification of signature pedagogies as a way a developing teacher identity, advancing pedagogical awareness and promoting pedagogical meaning making may provide opportunities for identity expansion beyond the trade. It works with ‘resistance’ by merging pedagogy with the structural conditions of the trade. In short, it links identity to pedagogy and provides a pathway from trade practitioner to teaching trade practitioner.

The use of signature pedagogies also provides trade tutors resistant to the notion of being a teacher with a way into the world of teaching while maintaining their own identity as tradesperson. It is accessible, relatable and relevant. It provides the opportunity for tutors to own the learning and teaching space of their discipline and advance from their own position. A signature pedagogy however, can be developed only by those who are embedded in its current representation and by those for whom it has cultural relevance. Teacher educators should be warned that the discussion and description of trade based pedagogical signature approaches is the prerogative of the trade expert and is not territory to be traversed by the teacher.

While signature pedagogies are useful, they are not sufficient. Shulman recognises some of the problems associated with the advancement of signature pedagogies. In “Pedagogies of Uncertainty” (Shulman, 2005a) he suggests that “almost all signature pedagogies need repair” (p. 22) and without deflection there is the danger of “pedagogical inertia” (p. 22). This caution suggests that, without development beyond initial theory building, the advance of trade teacher knowledge and practice will be limited to what has been done in the past.
What the development of signature pedagogies does have the ability to do is to bridge the world of the tradesperson with the world of teaching. However, to be successfully developed into a useful theory of trade teacher practice it will require some careful work and the mediation of an agentic tutor/teacher able to expand and innovate to take it beyond its existing state.

In summary, a process of validating current cultural practices that provides a pedagogical awareness and links to a ‘teacherly’ world will provide a bridge for trade professionals. The skills, knowledge and dispositions of a discipline merged with the skills, knowledge and dispositions of teaching has the possibility for providing new ways of experiencing and engaging in teaching. The development of signature pedagogies and the process of then supporting their advancement is part of a theory of experience for the purposes of teacher education relating to trade and trade learning and teaching.

**Trade tutor identity building**

The model outlined below (Figure 28) considers the idea of signature pedagogies as a starting point for collegial identity-building in a ‘teacherly’ framework. It acknowledges that to bring trade-based discipline expertise into teaching-based trade expertise, an approach that recognises an emerging multi-dimensional educational identity is necessary.

The acknowledgement of a multifarious identity and opportunities for identity building as outlined in Chapter Four starts with the idea of embedded pedagogical approaches as essential components of a teacher education programme where the promotion of autonomy and agency (Hodkinson, 1998) built through collaboration and discussion leads to collective occupational identity and the development of new knowledge in the world of teaching.

The model encompasses the bricoleur as the technical aspects of teaching practice where immediate and short-term solutions to teaching and learning conditions are required; the engineer as the systematic and analytical aspect to plan for the long term and to design learning and curriculum; and the kaitiaki dimension that is student focussed and
concentrated on the guidance and stewardship of novices in their care. These aspects or dimensions and an increasing confidence in these areas supports the emergence of new pedagogical models.

The question of what to teach and how to engage in teacher training emerges. Trade teachers themselves readily identify the areas in which they need to acquire teacherly knowledge and skills. Follow-up questions to trade tutors after the completion of the main part of this study elicited examples of needs foremost in their minds.

Most explicit was the need for skills in managing particular and varying groups of students, in particular, groups of young people. Many trade tutors have traditionally worked with apprentices or adults who require direct trade-based skills and knowledge. They are, in general, unused to working with students in large groups in institutional environments who may not be sure what they want to learn. Often they are not equipped to manage class size numbers who exhibit the anti-schooling behaviours of those ‘left out’ of the system, as discussed in Chapter Two.
Tutors also outlined the need for practical teaching skills and ways of keeping students engaged. They made reference to the need to learn and know about assessment and moderation practices and processes. They wanted to be equipped to make good decisions. Trade tutors want to get these procedural aspects of teaching right and want clear instructions in how to complete administrative tasks.

Trade tutors also said that they would like to deliver their subject area better; they would like ideas for building an ‘ethos’ within their teaching groups. Skills for online learning and technology in the learning environment were also raised as areas they would like to know more about. There are also opportunities to provide the skills and knowledge to support disciplinary based literacy and numeracy development as they relate to the specific trade.

The challenge is to provide opportunities for trade tutors to learn, from their own occupational cultural perspective, what they need in order to develop their teaching craft with examples and experiences that are meaningful and relevant. Providing the time and opportunity to interrogate the pedagogies relevant to their own discipline can produce these, particularly when supported by that which promotes collaboration, reflection and active learning. After all, this easily relates to the ways of learning in a trade environment.

**Final words**

Exploring the complexities of the trade education environment and the ongoing demands on the work of a trade tutor has provided some explanation for the disjunction of both trade tutors and trade education in New Zealand. Talking with trade tutors has provided an understanding of the depth of their skill and knowledge in their trade and in the teaching environment they inhabit with their students. It has also highlighted some of the problems associated with their work. I hope that this study supports the development of a greater understanding for this world of work. Possibly trade tutors will be encouraged to have greater involvement in the evolution of trade education in polytechnics.
The idea of characterising the work of the tertiary trade tutor as multi-faceted and multi-dimensional along with the promotion of theories of learning and identity building with signature pedagogies provides opportunities. This is a starting point for a model relevant to a teaching professional whose skills and knowledge cannot be summarized in a list.

The speed and frequency of reforms in the tertiary vocational education sector are unlikely to abate. However, the ability to prepare educators for successful teaching or tutoring careers in a changing environment and involve them in the mechanisms of their work is possible. The advancement of trade and technical education for twenty-first century skills depends on collaborative professional learning that bridges educational worlds of work and provides pathways and opportunities for new knowledge.
References


Benseman, J. (2003). *Literature review of New Zealand adult literacy research.* Auckland, NZ: Centre for Continuing Education/School of Education. The University of Auckland


doi:10.1177/1474022206067625


Retrieved from http://paperspast.natlib.govt.nz/cgi-bin/paperspast?a=d&d=CHP18850130.2.15


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‘Training for Trade” (*Evening Post*, 24 September, 1936)


Appendix A

Questionnaire for Trade Educators

Name _________________________________ Date _____________________

In what area of trade education do you teach?

To which age group do you belong? (please circle)
20-30  30-40  40-50  50-60  60+

Were you involved as a tradesperson in the trade within which you now teach? Yes/No (please circle)

If you answered yes to the above question, how many years were you involved in the trade?

What was your main role in the trade?

What is the main reason behind your becoming a trade educator?

What is the most rewarding part of being an educator in your area?

What are the main challenges in your work as an educator in this area?

Do you think trade related education might look different in the future? How?

What would you say is the most important aspect of your role in the education of young people in your trade?

What advice would you offer to a new trade tutor about teaching in your discipline?
Appendix B

Interview Questions/Starters

Trade Educators

Vocational Trade Education
• What is your idea of vocational trade’ education?
• What is trades education about?

Vocational Trade Educators
• How might you describe yourself; as a vocational educator or as something else?
• How might your role at an ITP differ to a workplace trainer’s role or a role in industry?

Skills and Knowledge
• How would you describe what you do as a trades’ educator?
• What would you say are the key skills that need to be learnt by students in your area of trade education?
• Why are these important?
• What would you say are the key bits of theory or the key areas of knowledge that make a good welder/builder/electrician?
• Can you explain why?
• What makes a good an excellent builder/welder/electrician?
• How do you teach that?

Curriculum
• How does the course you teach develop these skills and knowledge?
• If you could change the course how would you change it?

Students
• How would you describe your ideal trade student in the first year?
• How would you describe your ideal trade graduate?

Industry
• How would you describe your relationship as an educator, with industry
Appendix C
Example of Head of School Participant Information Sheet

Date:

Participant Information Sheet

Head of School, _______________________________________________________________
Project Title: Vocational trade education: fishing for a future
Researcher: Lisa Maurice-Takerei

Researcher introduction
I am an EdD (Doctor of Education) student at the University of Auckland, Faculty of
Education and a staff member at Manukau Institute of Technology. I am hoping to
undertake a project this year as part of the degree for a Doctor of Education. This is a
small scale, pilot study and is a starting point designed to explore and consider initial
ideas and concepts relating to vocational trade education.

Project description and invitation
I would like to seek your permission to gain email access to the lecturing staff in the
School of Electrical Engineering and Trades. With your approval I would like to send out
an email to lecturers involved in level 1-4 teaching and invite them to participate in a
small scale, pilot study.
Trade educators’ voices are noticeably absent in discussions surrounding vocational
education and I propose to present some of the voices of trades’ related educators from
Manukau Institute of Technology. These voices will provide a VET trade related
educator perspective on vocational education and training.

Project Procedures
It is proposed that the study will be conducted between February and April 2010.
Participation is voluntary. Lecturers will volunteer in response to an email request.
Lecturers will be asked to complete a questionnaire and choose whether they would like
to be involved in either a one-to-one interview or focus group discussion.

Questionnaires
Lecturers will be asked by the researcher to complete a short questionnaire. This will
take approximately 10 minutes. Questions relate to trade background and trade educator
views on trade education. Participants will have the right to withdraw information
provided on the questionnaire up until the 30th April.

Interviews
If lecturers choose to be involved in a one-on-one interview with the researcher these will take approximately 1 hour. Interviews will be convened at a time suitable to the participants. Interviews will be audio-taped or digitally recorded. Interview questions relate to ideas surrounding trade education including: skills and knowledge, curriculum and industry. Participants will have the right to ask for the recording to be stopped or paused at any point in the interview. Interviews will be transcribed by the researcher and the written transcription will be provided to the individual lecturer from between one week and up to ten days following the interview. Interviewees will have the opportunity to edit the transcription provided that they supply the changes before the end of one week following the written transcription having been provided to them. Participants have the right to withdraw any information provided up to April 30, 2010.

Focus Groups
If lecturers choose to be involved in a focus group discussion this will consist of 3-4 lecturers and will be conducted by the researcher. The focus group discussion will take approximately one and a half hours. Topics relate to ideas around trade and vocational education. The focus group discussion will be audio-taped or digitally recorded. Due to the nature of focus group discussions the tape recording will not be able to be stopped or paused and once data is given it cannot be withdrawn. Participants can choose to leave the focus group if they wish. Participants are asked to keep proceedings confidential.

Confidentiality
The information provided will be stored in a locked cabinet within the Manukau Institute of Technology premises for a period of six years for the purpose of possible further research. Digital recordings will be stored on a CD rom in a locked cabinet. After that period the information will be destroyed using a University of Auckland approved document and destruction service.

Confidentiality will be preserved throughout the research process. If the information provided is reported or published, it will be done in a way that does not identify individuals as the source.

While all responses will be kept confidential by the researcher there is no guarantee that contributions will not be identifiable.

Participation in the study is voluntary. Lecturers are assured that any academic or employment relationship with the Manukau Institute of Technology or the University of Auckland, Faculty of Education or any member of the staff will not be affected by either refusal or agreement to participate in this study.

It is hoped that participants will not experience any adverse consequences and I would like to seek your assurance that any member of staff will not be affected in terms of relations and employment whether or not they are part of the study.

It is requested that any adverse consequences as a result of the study should be reported to the researcher.

There is no funding attached to this study.
Contacts:
Supervisor:
Dr Joce Jesson
623 8899 x 48859
j.jesson@auckland.ac.nz
+64 (9) 373

Head of School:
Dr Airini
623 8826
airini@auckland.ac.nz

Researcher:
Lisa Maurice-Takerei (Doctor of Education student)
968 7263 or 021 153 5340
lmau002@auckland.ac.nz

If you have any concerns of an ethical nature you can contact the Chair of the University of Auckland Human Participants Ethics Committee at (+64)9 3737599 ext 87830, Private Bag 92019, Auckland, New Zealand.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 11 MARCH 2010 FOR A PERIOD OF THREE YEARS TO 11 MARCH 2013

Reference Number : 2010/031
Appendix D
Example of Consent form for Heads of School

Date:

Consent Form
Head of School, Electrical Engineering and Trades, Manukau Institute of Technology
Project Title: Vocational trade education: fishing for a future
Researcher: Lisa Maurice-Takerei

- I have read the Participant Information Sheet
- I agree to this research being undertaken in the School of Engineering and Trades at Manukau Institute of Technology
- I understand that this consent form will be stored for a period of six years before it is destroyed
- I understand that the information provided will be stored in a locked cabinet for a period of six years before it will be destroyed using a University of Auckland approved data and document destruction service
- I understand that participants have the right to withdraw any information/data provided in the questionnaire or one-to-one interview up to 30 April 2010.
- I understand that interviews and focus groups will be audio-taped or digitally recorded
- I understand that written transcriptions of the interview will be provided to participants
- I understand that participants in a one-on-one interview can request that the audio or digital tape recorder be turned off at any time during the interview
- I understand that participants can request a change to the written transcription if changes are provided to the researcher up to one week after they have received the written transcript
- I understand that due to the nature of focus group data once information is given it cannot be withdrawn
- I understand that participants can choose to leave the focus group if they wish
- I understand that while every effort will be made by the researcher to preserve anonymity and responses will be kept confidential, there is no guarantee that participants will not be identifiable
- I agree that participation in this study is voluntary and that any academic relationship or employment relationship or any other relationship with the Manukau Institute of Technology or The University of Auckland or any member of the staff will not be affected by either refusal or agreement to participate in this study.

This form will be kept for a period of six years

By signing this I agree to this research being undertaken as outlined above.
Signature __________________________________Date: …./…../………
(dd/mm/yyyy)

Participant __________________________________________________________ (please
state full name)

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS
ETHICS COMMITTEE ON 11 MARCH 2010 FOR A PERIOD OF THREE YEARS
TO 11 MARCH 2013

Reference Number : 2010/031
Appendix E
Example of Participant Information Sheet for Tutors

Date:

Participant Information Sheet
Lecturer/Tutor
Project Title: Vocational trade education: fishing for a future
Researcher: Lisa Maurice-Takerei

Researcher introduction
I am an EdD (Doctor of Education) student at the University of Auckland, Faculty of Education and a staff member at Manukau Institute of Technology. I am hoping to undertake a project this year as part of the degree for a Doctor of Education. This is a small scale, pilot study and is a starting point designed to explore and consider initial ideas and concepts relating to vocational trade education.

Project description and invitation
This study aims to explore the concepts of vocational education from the point of view of vocational trade educators. This is a small scale study designed as a pilot and a starting point to test questions and concepts for a wider future study. Vocational educators, especially those involved with trade education are noticeably absent from any of the policy debates relating to vocational education. Through the responses to a questionnaire and participation in either an interview or focus group, I propose to present some of the voices of trade related educators from Manukau Institute of Technology. These voices will provide a VET educator perspective. You are invited to be part of this study.

Project Procedures
The study will be conducted between February and April 2010. Participation is voluntary. The research involves gathering information through a questionnaire and either your choice of a one-to-one interview or participation in a focus group. At the time the questionnaire is completed you can make your choice between an interview or a focus group. Times will then be negotiated with those involved.

Questionnaire
If you volunteer to be part of the study you will be asked by the researcher to complete a short questionnaire. This will take approximately 10 minutes. Questions relate to trade background and trade educator views. Answers to the questionnaire will be coded based on number of years in your trade, age and years as an educator. Participants will have the right to withdraw information provided on the questionnaire up until the 30th April.
**Interview**
If you choose to be involved in a one-on-one interview with the researcher the interview will take approximately 1 hour. Interview questions relate to ideas surrounding trade education and including: skills and knowledge, curriculum and industry. Interviews will be convened at a time suitable to you. Interviews will be audio-taped or digitally recorded. You will have the right to ask for the recording to be stopped or paused at any point in the interview. Interviews will be transcribed by the researcher and the written transcription will be provided to you from one week and up to ten days following the interview. You will have the opportunity to edit the transcription provided you supply the changes before the end of one week following the written transcription having been provided to you. You have the right to withdraw any information provided up to April 30, 2010.

**Focus Group**
If you choose to be involved in a focus group discussion the discussion will involve 3-4 lecturers and will be conducted by the researcher. The focus group discussion will take approximately one and a half hours. The time for the focus group discussion will be negotiated with the lecturers involved. Topics for the discussion relate to ideas around trade and vocational education. The focus group discussion will be audio-taped or digitally recorded. Due to the nature of focus group discussions it is not possible for the tape or digital recorder to be stopped or paused and once data is given it cannot be withdrawn. You will have the right to not answer questions or if you wish you can choose to leave the focus group. Transcriptions will be provided to participants on request from one week and up to ten days following the focus group discussion.

**Confidentiality**
While all responses will be kept confidential by the researcher there is no guarantee that your contributions will not be identifiable. The Head of School has been notified of the research.

The information that you provide will be stored in a locked cabinet within the Manukau Institute of Technology premises for a period of six years for the purpose of possible further research. Digital recordings will be stored on a CD rom in a locked cabinet. After that period the information will be destroyed using a University of Auckland approved document and destruction service.

Confidentiality will be preserved throughout the research process. If the information you provide is reported or published, it will be done in a way that does not identify you as the source.

The researcher has sought and will continue to seek to minimise any possible adverse consequences related to this study, however, any adverse consequences as a result of the study should be reported to the researcher.

There is no funding attached to this study.

Participation in the study is voluntary. Your academic or employment relationship with the Manukau Institute of Technology or the University of Auckland, Faculty of Education or any member of the staff will not be affected by either refusal or agreement to participate in this study.

Contacts:
Supervisor:
Dr Joce Jesson
623 8899 x 48859
j.jesson@auckland.ac.nz
+64 (9) 373

Head of School:
Dr Airini
623 8826
airini@auckland.ac.nz

Researcher:
Lisa Maurice-Takerei (Doctor of Education student)
968 7263 or 021 153 5340
lmau002@auckland.ac.nz

If you have any concerns of an ethical nature you can contact the Chair of the University of Auckland Human Participants Ethics Committee at (+64)9 3737599 ext 87830, Private Bag 92019, Auckland, New Zealand.

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 11 MARCH 2010 FOR A PERIOD OF THREE YEARS TO 11 MARCH 2013

Reference Number : 2010/031
Appendix F
Example of Consent Form for Trade Tutors

Date:

Consent Form
Lecturers/Tutors

Project Title: Vocational trade education: fishing for a future
Researcher: Lisa Maurice-Takerei

- I have read the Participant Information Sheet
- I agree to take part in this research
- I understand that this consent form will be stored for a period of six years before it is destroyed
- I understand that participation in this study is voluntary and that any academic relationship or employment relationship or any other relationship with the Manukau Institute of Technology or The University of Auckland or any member of the staff will not be affected by either refusal or agreement to participate in this study
- I understand that the study consists of a questionnaire and participation in either an interview or a focus group
- I understand that I have the right to withdraw any information/data provided in the questionnaire up to 30 April 2010
- I understand that interviews and focus groups will be audio-taped or digitally recorded.
- I understand that during the interview I can request that the audio or digital tape recorder be turned off at any time
- I understand that due to the nature of focus group data I cannot ask for the audio tape or digital recorder to be turned off or paused during the focus group discussion
- I understand that I can choose not to answer questions in the focus group or I can leave the focus group discussion if I wish
- I understand that written transcriptions of the interview will be provided to me from one week to ten days following the interview
- I understand that I can request a change to the written transcription or withdraw any information/data provided in the interview up to one week following the provision of the written transcript to me
- I understand that due to the nature of focus group data, once information is given it cannot be withdrawn
- I understand that while every effort will be made by the researcher to preserve anonymity and responses will be kept confidential, there is no guarantee that participants will not be identifiable.

This form will be kept for a period of six years

By signing this I agree to participate in this research as outlined above.

Signature ___________________________________ Date: ........../........
(dd/mm/yyyy)

Participant
______________________________________________________________ (please state full name)

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON

Reference Number: 2010/031
### Appendix G
A table of key events relating to Trade and Technical Education in New Zealand

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1865</td>
<td>The Masters and Apprentices Act</td>
<td>Minimum requirements for employers involved in the indenture of children over 12. Basic provisions for food, clothing, bedding and moral instruction.</td>
</tr>
<tr>
<td>1877</td>
<td>Education Act</td>
<td>Free, compulsory and secular education for children from 5 to 15 years</td>
</tr>
<tr>
<td>1894</td>
<td>The Masters and Apprentices Bill</td>
<td>Sought better protection for apprentices, minimum wages and to limit the number of apprentices. Adequate instruction of the trade. Strong opposition and withdrawn</td>
</tr>
<tr>
<td>1894</td>
<td>Industrial Conciliation and Arbitration Act</td>
<td>Legal recognition to unions. Impact on apprenticeship conditions, learning, wages,</td>
</tr>
<tr>
<td>1895</td>
<td>The Manual and Technical Elementary Instruction Act</td>
<td>Provided for Education Boards and others to establish government-funded classes for technical instruction and drawing as compulsory in primary schools</td>
</tr>
<tr>
<td>1900 and 1902</td>
<td>Manual and Technical Instruction Act</td>
<td>Attempt to encourage schools to 'liberalise' their curriculum to include technical subjects. Opened the opportunity for technical 'classes' to be conducted by Education Board, Councils or Municipal Councils or any other local authority.</td>
</tr>
<tr>
<td>1903</td>
<td>Secondary Schools Act</td>
<td>An Act which forced a free place system in secondary schools. Provided for the inspection of secondary schools.</td>
</tr>
<tr>
<td>1908</td>
<td>Education Act</td>
<td>Provided for the establishment of technical schools</td>
</tr>
<tr>
<td>1908</td>
<td>The Master and Apprentice Act re enacted</td>
<td>Made subject to the conditions of the IC&amp;A Act.</td>
</tr>
<tr>
<td>1908</td>
<td>Education Act</td>
<td>Provided for establishment of day technical schools and broadened 'free places' qualification in the Secondary Schools Act of 1903</td>
</tr>
<tr>
<td>1914</td>
<td>Education Act</td>
<td>Technical Schools to be organised as a separate branch of the education system. Provided funding for secondary schools and thus departmental and administrative level control. Prescription of the secondary school curriculum authorised</td>
</tr>
<tr>
<td>1923</td>
<td>The Apprentices Act</td>
<td>Nationally approved standards of training and formalisation of apprenticeship and training. Set up voluntary and local apprenticeship committees. Employers concerned that the act weighted too much in favour of apprentices and disadvantaged employers.</td>
</tr>
<tr>
<td>1925</td>
<td>Report on the New Zealand Education System</td>
<td>Commissioned by the Education Department. Suggested that Technical High Schools and Secondary Schools were duplicating work and could be amalgamated</td>
</tr>
<tr>
<td>1927</td>
<td>The Apprentices Amendment Act</td>
<td>Cancelled existing Arbitration Court orders fixing proportions of apprentices to journeymen</td>
</tr>
<tr>
<td>1928</td>
<td>The National Industrial Conference</td>
<td>Followed a failed Bill that attempted to radically reform the Industrial Conciliation and Arbitration Amendment Bill. Little consensus reached and little change resulted</td>
</tr>
<tr>
<td>1929</td>
<td>Apprenticeship Conference</td>
<td>Employers, workers, Education Department, Labour department convened to rework the details of the 1923 Act</td>
</tr>
<tr>
<td>1930</td>
<td>The Atmore Report</td>
<td>Some concerns at the crossover of secondary schools and technical schools. Recommended more practical and less academic subjects in schools and less of an emphasis on examinations</td>
</tr>
<tr>
<td>1937</td>
<td>The New</td>
<td>International educationalists and reformers to stimulate debate.</td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1944</td>
<td>The Thomas Report</td>
<td>Promoted a ‘curriculum for all’ and recommended a ‘common core’ curriculum drawn from academic and practical strands up to the end of form four.</td>
</tr>
<tr>
<td>1944</td>
<td>Commission of Inquiry into Apprenticeships and Related Matters</td>
<td>Recommended the appointment of an Apprenticeship Commissioner and four Deputy Apprenticeship Commissioners to replace the voluntary and local committees set up in the 1923 Act.</td>
</tr>
<tr>
<td>1944</td>
<td>The Thomas Report</td>
<td>A 'Curriculum for All’ created with more of an emphasis on a common core curriculum for secondary schools emphasising practical as well as academic strands compulsory up to the end of form four.</td>
</tr>
<tr>
<td>1944</td>
<td>Free Secondary Education</td>
<td>Introduced universal free compulsory secondary education. School leaving age raised from 14 to 15.</td>
</tr>
<tr>
<td>1945</td>
<td>Education (Post-Primary Instruction) Regulations</td>
<td>Abolished matriculation. The nature and scope of a new core curriculum requirements</td>
</tr>
<tr>
<td>1946</td>
<td>Apprentices Amendment Act</td>
<td>Sought to manage lapsing apprenticeship orders due to servicemen returning from WWII</td>
</tr>
<tr>
<td>1947</td>
<td>The Adult Education Act</td>
<td>Consolidated the findings from 1944 Commission of Inquiry. Provided for a Commissioner of Apprentices to improve and supervise the training and education of apprentices and to foster collaboration between the Department of Education and the schools and the Department of Labour and the trades. New Zealand apprenticeship committees set up.</td>
</tr>
<tr>
<td>1948</td>
<td>The Apprentices Act</td>
<td>Authorised the establishment of a Trades Certification Board chaired by a nominee of the Minister of Education to develop examinations for apprentices. They set theoretical and practical standards. Certified institutions as suitable to deliver that curriculum reported to the Ministry of Education.</td>
</tr>
<tr>
<td>1949</td>
<td>The Trade Certification Act</td>
<td>Established the New Zealand Council for Technical Education</td>
</tr>
<tr>
<td>1958</td>
<td>Commission on Education in New Zealand (The Currie Commission)</td>
<td>Set up the characteristics of different TEO bodies Universities, Colleges of Education and Polytechnics.</td>
</tr>
<tr>
<td>1960</td>
<td>Commission of Inquiry into Vocational Training in New Zealand</td>
<td>Chair - Tyndall (Judge of Court of Arbitration): two union reps, two employer reps, one technical education rep. To report on the change required for vocational training in New Zealand based on technological change and economic development and population growth. A more systematic approach for apprenticeships was recommended. Terms of apprenticeship reduced in many trades.</td>
</tr>
<tr>
<td>1964</td>
<td>Education Act</td>
<td>The New Zealand Council for Technical Education disestablished and replaced by the Vocational Training Council. The VTC included reps from the Ministry of Education, the Ministry of Labour and various Industry representatives through 26 Training boards – providing for the systematic co-ordination between the needs of vocational training and education.</td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
<td>Details</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>1970</td>
<td>The Apprenticeship and Related Trade Training Committee and the Vocational Training Council deliver its first report.</td>
<td>The Apprenticeship and Related Trade Training Committee (est. 1970) report discussed the low status of trades and the small wages for apprentices, discussed around competency rather than time served and the amount and quality of off-job and on-job training. Recommended an overhaul of the apprenticeship system.</td>
</tr>
<tr>
<td>1979</td>
<td>Vocational Awards Act</td>
<td>The Authority for Advanced Vocational Awards established. Membership consisting of The Director-General of Education two members of Technical Institutes Association, one member of Association of Teachers in Technical Institutes, Chairman of the Vocational Training Council, Chairman of NZ Vice-Chancellors’ Committee and others. This body provided standards for qualifications at diploma level and the Trades Certification Board for Certificate level.</td>
</tr>
<tr>
<td>1983</td>
<td>Apprenticeship Act</td>
<td>Set up of New Zealand Apprenticeship Committees and empowered to recommend changes to apprenticeship training.</td>
</tr>
<tr>
<td>1988</td>
<td>The Report on Post Compulsory Education and Training (PCET) the Hawke Report</td>
<td>Recommended the establishment of a National Qualifications Authority, funding formulas and student fees.</td>
</tr>
<tr>
<td>1989</td>
<td>Learning for Life</td>
<td>Discussed the lack of cohesion in the apprenticeship system. Outlined the different functions of those involved in apprenticeships/industry training with 35 national apprenticeship committees and approx 350 local apprenticeship committees.</td>
</tr>
<tr>
<td>1990</td>
<td>Education Amendment Act</td>
<td>This act gave more independence and freedom to tertiary organisations and established New Zealand Qualifications Authority (NZQA). NZQA replaced the Trades Certification Board and the Authority for Advanced Vocational Awards Increased access. Education Training and Support Agency (ETSA) was set up as a crown agency to support the employment side of the apprenticeship system. Changed its name to Skill New Zealand in 1988 and became part of the Tertiary Education Commission in 2003.</td>
</tr>
<tr>
<td>1991</td>
<td>Employment Contracts Act</td>
<td>Removed the rights of unions to negotiate employment conditions and wages. Disestablished the Arbitration Commission. In effect this disestablished the apprenticeship system.</td>
</tr>
<tr>
<td>1991</td>
<td>National Government Tertiary Review</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>Industry</td>
<td>Repealed the Apprenticeship Act of 1983 and described the role for</td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>1994</td>
<td>Training Act</td>
<td>Industry Training Organisations (ITOs) as standard setting bodies. Apprentices became industry trainees, training agreements replaced apprenticeship contracts. ETSA became a funding body and responsible for the recognition of ITOs. ITOs responsible for standard setting. Off-job training became the role of the Ministry of Education</td>
</tr>
<tr>
<td>1994</td>
<td>The Todd Task Force</td>
<td>Further expand PTEs. Continue institutional fee setting</td>
</tr>
<tr>
<td>1995</td>
<td>Industry Training Review</td>
<td>Industry Training Fund changed the funding for industry training</td>
</tr>
<tr>
<td>2000</td>
<td>Modern Apprenticeship Training Act</td>
<td>To encourage employers to hire more and younger apprentices. Introduced apprentice brokers (co-ordinators)</td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td>Training fund changed to bulk funding model for industry training</td>
</tr>
<tr>
<td>2000 - 2001</td>
<td>Tertiary Education Advisory Commission</td>
<td>Concern at proliferation and activities of ITOs</td>
</tr>
<tr>
<td>2001</td>
<td>Review of Industry Training</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Industry Training Amendment Act</td>
<td>Sets out activities for which ITOs can claim funding through the Tertiary Education Commission. Purchasing of off-job training removed from Ministry of Education to ITOs. ITOs have additional leadership roles and more tests in the recognition process</td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td>Establishment of Tertiary Education Commission. ETSA incorporated into TEC</td>
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<tr>
<td>2004</td>
<td></td>
<td>Industry training fund change</td>
</tr>
<tr>
<td>2010</td>
<td>Education Amendment Act</td>
<td>Extends entitlement for free state school or partnership school from 5 to 19 years. Provides for secondary-tertiary programmes of study co-ordinated by a provider or lead provider and sets out rules for 'provider groups'</td>
</tr>
<tr>
<td>2011/2012</td>
<td>Industry Training Review</td>
<td>Review of Modern Apprenticeships</td>
</tr>
<tr>
<td>2013</td>
<td>Apprenticeship 'reboot'</td>
<td>Offers a cash bonus to employers to take on apprentices</td>
</tr>
<tr>
<td>2013</td>
<td>Industry Training and Apprenticeships Amendment Bill</td>
<td>Provision to regulate ITOs and outlines functions of TEC, NZQA and promotes</td>
</tr>
<tr>
<td>2013</td>
<td>Education Amendment Act</td>
<td>More structure for secondary-tertiary programmes. Approval and operation of partnership schools. 'Secondary schools' become 'relevant schools'</td>
</tr>
</tbody>
</table>