EDUCATION

TRADE ROUTES

Charting New Pathways from Secondary School to Industry Training

Michael Johnston
Foreword by Josh Williams

THE NEW ZEALAND INITIATIVE

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About The New Zealand Initiative

The New Zealand Initiative is an independent public policy think tank supported by chief executives of New Zealand businesses. We believe in evidence-based policy and are committed to developing policies that work for all New Zealanders.

Our mission is to help build a better, stronger New Zealand. We are taking the initiative to promote a prosperous, free and fair society with a competitive, open and dynamic economy. We are developing and contributing bold ideas that will have a profound, positive and long-term impact.

ABOUT THE AUTHOR

Dr Michael Johnston is a Senior Fellow at The New Zealand Initiative. He leads the Initiative's work on education. He is a cognitive psychologist with a background in literacy research, educational assessment and psychometrics.

Prior to his time at the Initiative, he was the Associate Dean (Academic) of the Faculty of Education at Victoria University of Wellington. Between 2005 and 2011, he worked at the New Zealand Qualifications Authority (NZQA), where he developed a new, more reliable, marking system for NCEA examinations. In 2024, Michael chaired a Ministerial Advisory Group (MAG) for Education Minister Erica Stanford. The MAG advised on the development of a knowledge-rich curriculum for English and mathematics. Following that work, Michael is currently a member of the Curriculum Coherence group, which advises on the development of knowledge-rich curricula across all school subjects. Michael is also a member of a technical advisory group to NZQA on assessment for NCEA and New Zealand Scholarship.

In his time at The New Zealand Initiative, Michael has published reports on Modern Learning Environments, systems reform in education, teacher education, the use of AI in education, and pathways for industry training and apprenticeships.

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All opinions, omissions, and errors in this report remain my own.

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Foreword

In true Jerry Maguire style, the chance to write a foreword to any Dr Michael Johnston report is a "you had me at hello" moment.

However, the fact that my favourite psychometrician and science-of-learning guru has aimed his intellect at my favourite subject – the education to employment journey – is genuine cause for celebration. This report is a gift to secondary and vocational education, industries, and workforce development. But over and above that, it's a gift to parents. These are our kids after all.

The report's core thesis – that more of our young people need and deserve well supported pathways into industry training straight from school – is indisputable. The multiplicity of reasons why that's currently only the story for only six percent of our school leavers is deftly outlined in the chapters ahead. Spoiler alert: it's a decades-long series of missed opportunities and unmet potential. Happily, and simultaneously, Michael also demonstrates that many of our existing system settings could be leveraged to achieve a far better school-to-work ecosystem, if we can just break a few bad habits.

Tomorrow's Schools, way back in 1989, was intended to ensure each school's curriculum delivery was responsive to local needs - including its local workforce, and the jobs that young people are likely to occupy. This is because communities would presumably like a few of their talented young people to stay, or at least prepare them well for where they are actually going. That's not a very far cry from the Specialist Schools concept Michael is promoting, and the existence of such schools would in fact be proof that those schools were being responsive.

In 2002, NCEA gave our system an enormous pantry of ingredients to provide a full spectrum of flavoursome learning pathways steeped in purpose and relevance. But, 23 years later there's still only one recipe we are truly confident to make: university entrance. Never mind that only three out of 10 school leavers are ordering that particular dish.

Last but not least, dual enrolment has been enabled in our Education legislation since 2010, but is entirely underutilised. It powers Trades Academies – which according to research Arthur Graves and I recently undertook for the Food and Fibre Centre of Vocational Excellence – clearly work. However, the opportunity to learn through a combo of school and tertiary and workplace is currently capped and trapped within the Trades Academy scheme. The underlying concept and resourcing model behind secondary-tertiary programmes need not and should not be limited to that.

To be clear, I'm not sure about all of Michael's policy prescription, but any weird in here is utterly trounced by the wonderful. The report thoroughly demonstrates that a true Dual system is there for the taking. One that provides a true and seamless pipeline to productive careers. The same Dual system that keeps youth unemployment in places like Germany and Switzerland at two or three percent, even through economic shocks.

Why wouldn't we? Why don't we? These are our kids after all.

Josh Williams
Head of Consulting at Skills at Skills Group, and the National Co-ordinator of Global Apprentice Network New Zealand

Executive Summary

New Zealand faces a significant challenge in the low participation of young people in industry and trades training. While approximately half of German school leavers enter Germany's dual-training system, only 6% of New Zealand's school leavers undertake workplace-based training. This disparity contributes to New Zealand's comparatively high youth unemployment rate of 10.7%, nearly double Germany's rate of 6.0%.

The situation represents a waste of human capital and opportunity. Industry training can lead to many high-demand vocations, yet about 40% of New Zealand's school leavers do not engage in any form of tertiary education in the year after leaving school. While most subsequently find employment, about 11% of 16–19-year-olds are not in employment, education or training (NEET) – nearly double the proportion in workplace-based learning.

Compared to the 6% of New Zealand's school leavers entering workplace-based training, about one-third enrol in university degrees. While this might seem desirable, undertaking university degrees incurs both financial and opportunity costs. It is likely that some young people enrol at university simply because it is the most well-signalled pathway for school leavers and because university degrees carry high cultural status.

The German dual training system demonstrates what is possible with well-designed pathways from school to industry training. This system coordinates high-quality training between workplaces and training centres, preparing young people for 326 occupations. About 93% of dual trainees graduate, and three-quarters are employed directly after training with the companies where they trained. The success of the German system is underpinned by strong cultural esteem for trades and industry, with many businesses seeing it as their duty to contribute to training the next generation of skilled workers.

New Zealand has several initiatives to support pathways from secondary school to industry training, primarily under the Youth Guarantee umbrella. These include Trades Academies, which enable dual enrolment at schools and tertiary providers, and Gateway, which facilitates workplace-based learning. However, these programmes have limited uptake, with just 2.4% of young people aged 16–19 participating between 2020 and 2023. They are often positioned as alternatives for students 'at risk' rather than as mainstream pathways.

The root of the problem is cultural. It stems from a disparity of esteem between industry training and university education among parents, many schools and teachers, and students themselves. This is exacerbated by the strong gearing of schools towards university preparation as the default setting. While University Entrance (UE) provides a clear pathway to university, there is no parallel qualification for entry into industry training. The secondary curriculum is dominated by subjects derived from university disciplines, and industry training pathways are typically treated as 'add-ons' rather than being afforded equal priority.

Current funding arrangements also create challenges. The main institutional provider of industry and trades training, Te Pūkenga, runs an unsustainable deficit. When it is disestablished in early 2026, many of its successor organisations are not expected to be financially stable. A new funding model will be necessary

to ensure the long-term viability of industry training institutions and improve the quality of training they offer.

The Apprenticeship Boost scheme, introduced during the COVID pandemic to subsidise trainee wages, demonstrated that many employers have untapped capacity to take on trainees but may not see sufficient value in doing so without subsidies. The scheme has been successful in increasing participation in apprenticeships, with numbers rising by 36% between 2020 and 2022. However, it has since been scaled back and may not continue beyond 2028. New incentives for employers will be needed if the numbers of young New Zealanders undertaking workplace-based industry training is to be substantially increased.

The Queensland BUSY School model provides valuable insights into how industry training pathways might be better integrated into secondary education. BUSY's educational approach includes flexible timetables, a focus on work readiness, workplace-based education, and provisions for study with tertiary providers. While BUSY specifically caters to students who have disengaged from mainstream schooling, elements of its model could inform the development of industry training pathways in mainstream schools. BUSY has recently established a campus in Auckland under the new charter school model.

This report proposes comprehensive reform of both secondary and post-secondary education to establish clear pathways into industry training and raise its cultural esteem. The reforms aim to create a coherent pathway from school to industry training that enjoys parity of esteem with the university track. While full adoption of a system like Germany's dual training approach is not culturally or politically realistic in New Zealand, key elements can be successfully adapted to the New Zealand context. The goal is not to supplant university degrees as the post-school destination of choice but to ensure that young people see industry training as an equally valid option and are well-prepared to pursue it if they choose to do so.

Recommendations

Specialisation in the senior secondary system

1. Establish cooperative arrangements between secondary schools that enable specialisation at Years 11–13, either in preparation for university, or for industry training and other vocational training. These arrangements would facilitate students' transitioning from Year 10 to a school catering to their post-school goals.
2. Provide funding for schools to develop and establish specialisation in industry training and vocational education programmes.
3. Undertake a ten-year longitudinal analysis of student outcomes following a wide variety of tertiary programmes in both industry training and university programmes. Publish the results to inform students' choices in senior secondary education and beyond.

Senior secondary curriculum

4. Bring together the Trades Academy, Gateway and Vocational Pathways elements of Youth Guarantee to form the core of a curriculum for schools specialising in industry training-track education.
5. Redirect Youth Guarantee Fees-Free funding to contribute to a mainstream senior secondary pathway with integrated workplace-based learning and opportunities for dual enrolment with tertiary providers.
6. Enact legislative change to enable students to be paid for work undertaken as part of school-based industry training.

Qualifications

7. Establish a National Certificate of Industry Training at Level 3 on the New Zealand Qualifications and Credentials Framework (NZQCF) based on configurations of unit standards recognised by industry bodies as certifying readiness to undertake industry training in specific trades. The existing Vocational Pathways provide a starting point for developing such a qualification.
8. Level university degrees separately to trade and industry qualifications on the NZQCF to avoid explicitly valuing the former more highly than the latter.

Post-school initiatives

9. Redirect universal fees-free funding to support workplace-based industry training. This policy initiative would include:
    - Fees-free training in polytechnics and private training establishments for all students in the New Zealand Apprenticeship programme.
    - Means testing degree-level fees-free study based on parental income.
    - Reinstating interest on student loans.

Employers

10. Introduce a graduated basic training wage, with annual increments, that starts at a lower rate than the present training wage and terminates at a higher rate.
11. Introduce a bonding system for trainees whereby they receive a wage subsidy, and

their employers secure an option to employ them for three years immediately following graduation. Trainees who break bonds would incur a debt to their employers, underwritten by the IRD.

Workforce Development Councils

12. Reconstitute Workforce Development Councils such that their members are elected by businesses in each industry sector.
13. Expand the role of Workforce Development Councils to include provision of advice on curriculum development for schools offering an industry and trades training-track.

Evaluation and monitoring

14. Establish an ongoing evaluation programme to monitor the effects of all or any of the above recommendations that are implemented. This review cycle should inform policy modifications.

CHAPTER 1
Introduction

The proportion of young New Zealanders undertaking apprenticeships[1] is low by international standards. It contrasts strongly with the proportions in many other developed economies. Perhaps most notably, in Germany approximately half of all school leavers engage in apprenticeships through the country's 'dual training' system.[2] The German system, described in detail in Chapter 2, involves a partnership between companies and training centres. Trainees spend part of their time being trained on-the-job by a company, and the rest in a training centre. Half of all Germany's school leavers enter the dual training system. In contrast, only 6% of New Zealand's school leavers undertake workplace-based training. A majority of trainees in New Zealand commence training at least a decade after leaving school; in 2023, 59% were 30 years or older and 33% were 40 or older.[3]

Youth unemployment is much lower in Germany than in New Zealand. According to the World Bank, the 2023 rate of youth unemployment in Germany was 6.0%. In New Zealand, it was 10.7%. For comparison, the rate in Australia was 8.6%.[4]

Averaged over the past ten years, around 40% of New Zealand' school leavers did not engage in any form of tertiary education in the year after leaving school.[5] While most of that 40% found employment, about 11% of 16–19-year-olds were not in employment, education or training (NEET).[6] That is nearly double the 6% who were in workplace-based learning.

Given New Zealand's comparatively high rate of youth unemployment, the low participation of young New Zealanders in industry training constitutes a waste of human capital and opportunity. Industry training can lead to many high-demand vocations.

A substantially higher proportion of New Zealand's school leavers – about one-third – enrol in degree-level tertiary programmes, registered at Level 7 or higher on the New Zealand Qualifications and Credentials Framework (NZQCF).[7] While that might seem desirable, undertaking university degrees incurs both financial and opportunity costs. It is likely that some young people enrol at university simply because it is the most well-signalled pathway for school leavers, and because university degrees carry high cultural status.

If apprenticeship-track programmes were given greater prominence in the senior secondary school, students could make better-informed choices about post-school education. If those programmes were well-resourced and integrated with tertiary training and workplace experience, as they are in Germany, they would be more attractive to students. Over time, that would raise cultural esteem for trades and industry training in New Zealand.

In this report, New Zealand's pathways from school to industry training, and the industry training system itself, are analysed. As we will see, school-to-training pathways are often positioned as being for students who struggle in the 'mainstream' school system. This both results from, and contributes to, a cultural narrative that affords university degrees higher status than trades qualifications. Furthermore, there is a confusing farrago of 'bolt-on' schemes for workplace-based learning and vocational education. A unitary, coherent and integrated

pathway would be more likely to raise the status of industry-track education and attract students.

New Zealand's predominant system for industry and trades training that involves a workplace-based component is New Zealand Apprenticeships. In 2023, around 77,500 people were being trained in New Zealand Apprenticeships, up from around 55,500 in 2018. It is likely that this increase was largely driven by Apprenticeship Boost, a scheme introduced under the Ardern government to subside trainees' wages during the COVID pandemic. That scheme will be greatly pared back from 2025 and may not continue beyond 2028.[8] A fall in trainee numbers is a likely result. A difficult economic environment may also contribute to a decline in traineeships.

There is little point in preparing school students for traineeships that do not exist. The rise in apprenticeships[9] associated with Apprenticeship Boost suggests that wage costs constrain the numbers of traineeships that employers are willing to offer. Apprenticeship Boost is an expensive programme – in 2024 it received a budget allocation of $64 million.[10] If Apprenticeship Boost ceases in 2028, further government-funded wage subsides for workplace-based training are unlikely. If industry and trades training in New Zealand is to be expanded in the long term, new incentives for employers that do not come at such a cost to the state will have to be created. Improving the quality and relevance of training would help to secure the support of employers for workplace-based training.

Outline of the report

In Chapter 2, the German dual training system is described. It is arguably the world's highest-quality system for industry and trades training and serves as a benchmark for policy development.

In Chapter 3, the post-school destinations of New Zealand's school leavers and the drivers of activities for young people in the first few years after leaving school are analysed. Barriers to greater participation in industry training pathways are identified. In Chapter 4, existing schemes for industry-track education in New Zealand secondary school are explored, with a discussion of why they are so little used.

Chapter 5 presents a case study of Queensland's BUSY Schools model. BUSY caters to senior secondary students who have disengaged from other schools. It focusses on skills development, including those relevant to industry training, and getting students work-ready. Although it offers elements that are specific to students with various high needs, its basic structure could strongly inform the development of an industry training track for mainstream secondary schools. At the beginning of the 2025 school year, BUSY opened a charter school campus in Auckland.

Chapter 6 surveys New Zealand's industry training system, including apprenticeships and training institutions. It highlights areas in which structural and policy changes could yield improvement. In Chapter 7, the final chapter of this report, recommendations are made for policy changes to establish a coherent, well-signalled school-to-training track into a high-quality workplace-based industry training system.

CHAPTER 2

The German Dual-Training system[11]

Germany's dual training system (Ausbildung) sets an international gold standard for industry and trades training. It provides a comprehensive pathway from school to industry training. Dual training has a very high uptake with half of all German school leavers participating. The training is internationally recognised as being of very high quality and is greatly valued and well supported by German businesses. Trainees are paid for the workplace-based component of their training and do not pay for the provider-based component. While industry training in Germany may not enjoy full parity of esteem with university education, the disparity is much less pronounced than it is in New Zealand.

In this chapter, the dual training approach is described in depth. Full adoption of the system in New Zealand is not culturally or politically realistic. Nonetheless, it provides a benchmark for policy development to aim towards, and key elements could be successfully adapted to the New Zealand context.

Germany's dual training system was established by a Federal Act in 1969. The Act also put in place a comprehensive pathway from school to industry training. The term *dual training* refers to the joint responsibility of companies and training centres (Germany's equivalent of New Zealand's polytechnics) to ensure high-quality industry training. The terms of this joint responsibility are laid out in the 1969 Act. There is some variation across Germany's Lander (States) in the dual training system, but its essence is the same across the country. The system coordinates high-quality training between workplaces and training centres.

The dual training system prepares young people for 26 professions and numerous individual occupations within each – some 330 occupations in total. Industry training takes either two or three years to complete, depending on the occupation.

At the federal level, dual training is overseen by the Federal Institute for Vocational Education and Training. The institute is responsible for the regulation of the system, as well as research, international agreements and new initiatives. Its Board comprises representatives of employers, trade unions, the Federal Government, and each Lander. By convention, Board decisions are made by consensus.

About 70% of German school leavers enrol in some form of Vocational Education and Training (VET). Some vocational programmes – for example, medical and pharmaceutical training – are not part of the dual training system. These programmes are completed solely in provider centres without the involvement of companies. About 70% of VET students – half of all school leavers – undertake dual training. About 93% of dual trainees graduate, and three-quarters are employed directly after training with the companies that trained them. About a third of trainees later qualify as Masters and go on to lead their own companies or become industry trainers.

Schooling in Germany

The dual training system is grounded in the German school system. Children in Germany commence school at the age of six. During the first four years, all students attend the same type of school with the same curriculum. From the fifth year, the school system divides into

two pathways. Academic-track students attend Gymnasium schools. Gymnasium education culminates with the university entrance (Arbitur) qualification, which qualifies successful candidates to enter university.

Other students attend Realschulen or Hauptschulen, which provide education directed towards vocations, including industry training through the dual training system. The exact structure and nomenclature of the different types of schools varies across Lander. In some, parents decide which type of school their children will attend. In others, students are allocated to school tracks based on their grades.

The division into two tracks of schooling at the early age of ten provides students with clear pathways. The Real/Hauptschule track lends prominence and status to industry training. It might be argued that German students are set on a course towards certain types of career too young, and that, as a result, they get little say in their own destinies. However, there is flexibility in the system. It is possible (although unusual) to move from one type of school to another.

Gymnasium graduates are not constrained to attend university. Graduates can opt to enter dual training instead, and many do. Real/Hauptschule graduates have less flexibility, usually lacking the preparation necessary for university. However, industry training graduates can then enter university as of right, with relevant prior learning recognised. For example, students who complete construction or electrical apprenticeships frequently go on to enrol in degree-level study in engineering.

There is also a dual study provision, meaning that students can study at university and undertake industry training at the same time. This is a very popular option for those wanting to train as engineers. Arbitur is required for dual study, so this option is largely restricted to Gymnasium graduates.

About a fifth of German school leavers who enter dual training programmes have the Arbitur university entrance qualification. Another third – about 17% of all school leavers – have a secondary school qualification. The remainder have an intermediate qualification; very few – about 3% – enter dual training with no qualifications. There are about 1.3 million young trainees at any time.

The structure of dual training

Central to the dual training system is partnership between training institutions and companies. In-company training follows a federally mandated framework, with regional and industry-specific variations. For each industry, there is a training framework curriculum specifying what must be included in training programmes.

Each trainee is contracted, employed, and paid by a company, and typically spends three or four days per week working and training on-the-job with that company. The remaining days are spent attending a training institution. In some cases, trainees also spend time working in companies other than their primary employer, to broaden their skill base and workplace experience. Trainees' remuneration is typically low – less than the general minimum wage. They do not, however, pay for their centre-based training and have high employment security.

Twenty percent of German companies participate in the workplace-based component of dual training. They enter into contracts with trainees that stipulate remuneration, conditions of employment, and the content of training to be provided by the company. They also protect trainees from dismissal after a probationary period. In some industries, competition between companies for trainees results in higher remuneration or bonuses. A high proportion of trainees secure ongoing employment with their training companies upon graduation.

Many companies engage with schools to inform students about opportunities the companies can offer, and to recruit them. Some also provide internships, enabling school students to work in companies for one day per week.

German companies display a striking level of commitment to dual training. All companies pay levies to Chambers of Commerce to support the system, whether they take on trainees or not. Employers also bear the costs of workplace training. Many companies see it as a duty to take on trainees, albeit with the incentive of often being able to secure their best graduates as employees. The return on investment varies across industries; it takes longer in some industries than in others for trainees to become productive.

Training centres are jointly funded by the Federal Government and Chambers of Commerce, the latter using the levies paid to them by companies. The levy contribution keeps the public cost of dual training relatively low.

Different training centres exist for each Chamber. In most programmes, trainees spend about 30% of their time learning in training centres, and about one-third of that time is spent on general education – that is, on subjects such as mathematics and English language. The most important role of the training centres is to ensure that trainees receive the full range of skills pertinent to the occupation for which they are training. The precise content of off-job training – the training that takes place in the centres – is negotiated between companies and training institutions.

Examinations take place under the auspices of a multi-stakeholder examination board, not usually including those who trained the student. These stakeholders include Chambers of Commerce, unions, employer associations, and Federal Government. Board members include employers and training institution staff.

Chambers of Commerce and Guilds

Chambers of Commerce coordinate the dual training system. Although the present arrangements were established by the 1969 Act, the system is deeply rooted in tradition. The preservation of the term 'Guild', which goes back to the trade guilds of the Middle Ages, is testament to this.

Chambers are not state organisations. They are delegated responsibility for vocational training and for running examinations and qualifications by the government. There is a system of national standards governing the qualifications.

The Chambers oversee the registration of training programmes in the centres, monitor training, organise the placement of trainees in companies, and administer examinations. Chambers also certify the skills of migrant workers and help bridge any identified skills gaps.

Chambers also have a role in dispute resolution. Companies sometimes complain that institutions are not training the right skills, and institutions sometimes complain that trainees are being exploited and not properly trained in workplaces. Chambers arbitrate these kinds of dispute.

All companies must belong to either an Industry and Commerce Chamber or a Trade and Craft Chamber. As noted above, all member companies pay a levy, whether or not they take on trainees. These levies are largely used to fund the training centres, enabling them to provide fees-free training. Chambers must ensure value for money to avoid political questions about whether compulsory membership is justified.

Guilds differ from Chambers of Commerce in two main ways. First, they are industry specific. Each Guild is enabled under public law and thereby has a legislated monopoly for its industry. Second, unlike the Chambers, membership of Guilds is voluntary. Membership fees are

calculated as a proportion of each member company's turnover. Being a member of a Guild does not obviate the requirement to belong to a Chamber of Commerce.

Guilds provide technical advice to companies, especially regarding new technology. A few also run training centres for industry trainees. In these cases, Chambers remain responsible for qualifications, although responsibility for examinations may be delegated to Guilds.

Trainers

The high quality of Germany's trainers is a crucial component of the quality of the dual training system as a whole. Roughly a third of dual training graduates go on to complete a Master qualification. Masters can start their own businesses and become trainers themselves. Many Masters feel a sense of obligation to share their expertise with the next generation of trainees – another testament the strong cultural underpinnings of the dual training system.

A difference between Germany and New Zealand is in the age profile of trainers. In Germany, many qualified tradespeople become trainers relatively young. This is facilitated both by cultural esteem for trainers and by competitive remuneration. In New Zealand, training providers find it difficult to compete with industry on trainers' remuneration. As a result, there is a tendency for New Zealand's trainers to be late in their careers.

Analysis of opportunities for New Zealand

A salient basis for Germany's dual training system is early educational tracking of students. The specialisation of schools in either university-track education (Gymnasium) or industry training-track education (Real/Hauptschule) fully focuses each school on one track or the other. Students at each type of school know what they are aiming for.

In contrast, most New Zealand secondary schools focus primarily on university-track education, whether or not high proportions of their graduates actually go to university. For the most part, industry training pathways are treated as add-ons to a core academic orientation. They are widely seen as options for disengaged students, or for students who do not make sufficient progress in academic subjects.

For cultural reasons, adopting Germany's dual-track school system in New Zealand is not a realistic option. New Zealand's egalitarian ethos would strongly oppose determining children's educational destinies at the age of ten. This is partly attributable to the comparatively low cultural esteem for industry and trade professions relative to those that university graduates generally pursue. If industry training were valued as highly as it is in Germany, it might not be seen as so anti-egalitarian to track students early.

Even if the two tracks were held in equal esteem, it would not, arguably, be desirable to track ten-year-old children into different kinds of education as the Germans do. Ten-year-olds are much too young to make informed decisions with long-lasting implications for their lives. While parents are better placed to do so, children often develop new interests and aptitudes during adolescence. A better prospect for New Zealand might be to have schools specialise from Year 11. Reasons for giving serious consideration to this idea are discussed in Chapters 3 and 4.

Another bulwark of German dual training is the robust system of Chambers of Commerce and Guilds. Again, there are cultural reasons for that strength, and replicating it in New Zealand would be difficult. As noted above, the historical cohesiveness of trades in Germany probably has its roots in the medieval Guilds. The

contemporary manifestation of this tradition is a strong sense of commitment and duty amongst tradespeople to their crafts. This attitude contributes to the strength and quality of the dual training system in several ways.

The acceptance of compulsory levies to support training is one such effect: Companies' sense of duty to the trades underpins their willingness to financially support its continuation. Companies also see a collective benefit in training the next generation of tradespeople. This extends to companies absorbing the costs of workplace training until trainees are skilled and productive enough to work profitably.

Another effect of the German commitment to maintaining quality within their industries and trades is the frequent involvement of Master tradespeople serving as trainers in training centres. These are highly respected positions. Consequently, the quality of the training offered is very high.

In New Zealand, not all companies have a strong culture of duty when it comes to training, although an element of this is present in traditional trades like building and plumbing. While Chambers of Commerce exist in New Zealand, they do not have the status, influence or authority of the German Chambers. A compulsory levy for training young people would be politically difficult to implement.

Employment arrangements for trainers in New Zealand do not lend themselves to the high quality and status of German trainers. Staff at Te Pūkenga (New Zealand Institute of Skills and Technology) are paid according to collective agreements and provide little incentive for the most skilled people to become trainers. Staff at industry training organisations are not trainers at all. Rather, they are facilitators of training, responsible for ensuring that employers provide training and overseeing assessment.

In New Zealand, building a higher-quality system will be expensive. Greater financial incentives may be required to attract the most skilled people to be trainers. The state may have to bear much of the cost. Part of the solution may be to motivate and prepare young people to enter apprenticeships in greater numbers soon after leaving school. Another part of the solution may be to have specific qualifications for trainers. If there were a cadre of younger, qualified trainers, training could come to be seen as a legitimate career, as it is in Germany. That may lead to a more affordable tutor workforce with a younger age profile, which may be more relatable to trainees. Over time, it may also build stronger connections between colleges and companies than a system in which most trainers are nearing the ends of their careers.

German trainees tend to be paid considerably less than New Zealand trainees. Many need support from parents to meet living costs. In New Zealand, there is a provision for training wages, which cannot be less than 80% of the minimum wage.[12] As of 2024, the general minimum wage in Germany was €12.41 per hour.[13] The minimum wage for German trainees in their first year was €650[14] – approximately €4.10 per hour – just 33% of the general minimum. The actual amount paid to trainees, however, varies across regions and industries. Some industries pay approximately double the minimum. German trainees' wages increase yearly, and the minimum for final year trainees is about €5.54 per hour, or 45% of the general minimum wage.

It is essential that potential employers are not unduly deterred by the cost imposed by legislated minimum remuneration for trainees relative to the value they provide. The German approach of increasing training wages as trainees gain skill and become more productive is sound in this regard.

State funded wage subsidies can improve incentives for both prospective employers

and prospective trainees. New Zealand's Apprenticeship Boost scheme, discussed in detail in Chapter 6, was probably instrumental in producing a sharp increase in trainee numbers when it was introduced in 2021. Subsidies come at a cost to the taxpayer, however, and New Zealand is currently grappling with a structural deficit in government spending. Any subsidy, then, must be justified by a longer-term economic benefit flowing from a more skilled workforce.

CHAPTER 3

School leaver destinations

In this chapter, the post-school destinations of New Zealand's school leavers and the activities of young people in the first few years after leaving school are analysed. This gives context for understanding why so few of them undertake industry training.

In each year since 2014, between 59,000 and 65,000 young New Zealanders completed their secondary education. Notably, just one in 16 school leavers undertook industry training, compared with one in three who enrolled at university, and one in nine who became unemployed.[15]

An analysis of the activities of young New Zealanders aged 16–24 years, aggregated across the years 2020 to 2023, is shown in Table 1. These data give a broad indication of the trajectories of New Zealand residents in young adulthood. Sixty percent of 16–19-year-olds are at secondary school. A large majority leave when they are 17 or 18 years. Only a very small minority of 20–24-year-olds are enrolled at a school.

In the 16–19-year-old age range, 21% are in employment. This proportion rises to slightly more than half in the 20–24 year range. These figures include part-time work. Many young people who are employed are also studying, whether at school or in tertiary programmes.

Table 1: Activities of young people in age ranges 16–19 years and 20–24 years (2020-2023).[16]

Activity	Age range	
	16–19 years (%)	20–24 years (%)
Secondary school	60.1	0.5
Degree-level study (Level 7+)	10.9	23.2
Diploma-level study (Levels 5–6)	1.5	2.4
Certificates (Levels 1–4)	4.9	4.4
Youth Guarantee	2.4	0.1
Workplace-based learning	6.0	9.9
Employment	21.4	55.7
Not in employment, education or training (NEET)	11.3	13.9

Notes: Some categories overlap so figures add to more than 100%. Denominators for percentages are population figures from Infometrics17 with the denominator for 16–19-year-olds estimated from the 15–20 year band by multiplying by 0.8. Qualifications levels are designated by the New Zealand Qualifications and Credentials Framework (NZQCF).[18]

The most popular destination for post-school study is university. In the 16–19 year range, 11% – about a quarter of that age group not still at school – are enrolled in degree programmes (NZQCF Level 7). Just over half this proportion (6%) are enrolled with other tertiary providers, undertaking qualifications programmes at lower New Zealand Qualifications and Credentials Framework (NZQCF) levels. Some of these students are also enrolled at a school. In the 20–24 year age range, about a quarter of all young people are studying towards degrees, compared with just 7% studying towards qualifications at lower NZQCF levels.

Many tertiary qualifications take three years to complete, meaning that the period of study will, for many students, span both of the age ranges represented in Table 1. Furthermore, both age ranges include those who have not yet enrolled in tertiary programmes but will do so later. Both (but largely the 20–24 year range) also include those who have already completed tertiary qualifications.[19]

Students participating in Youth Guarantee comprise a subset of those studying towards Level 1–4 Certificates (represented in a separate row in the Table 1). Implemented by the Key government (in 2008), Youth Guarantee comprises a set of initiatives to provide opportunities for young people to obtain NZQCF Level 1–3 qualifications reliably leading to employment.[20] It includes Trades Academies, under which senior secondary students can enrol at tertiary institutions, and Gateway, a workplace-based programme. Youth Guarantee is described in detail in Chapter 4.

Workplace-based learning is designed to support young people transition from studying with a provider to learning in a workplace.[21] It entails contractual agreements between students, education providers (usually polytechnics or industry training providers) and employers. Just 6% of recent school leavers (16–19 year-olds) and about 10% of 20–24 year-olds participate in workplace-based learning. As noted in Chapter 1, most apprentices in New Zealand are aged 30 years or older.

Young people not in employment, education or training (NEET) are at greater-than-average risk of long-term welfare dependence and negative encounters with the justice system. Between 2020 and 2023, slightly over 11% of 16–19-year-olds, and 14% for 20–24-year-olds, were in NEET status. From the most recent available data (March 2024), 12.4% of 15–24-year-olds had NEET status.[22] Strikingly, the proportion of young people with NEET status is higher than the proportion in workplace-based training. In the 16–19-year age bracket, it is nearly double that proportion.

Young people at risk

The risk of school leavers becoming NEETs is highest for students who leave school without any National Certificate of Educational Achievement (NCEA) qualifications. According to the government's Education Counts website:

> There are significant and persistent disadvantages for those that don't achieve any school qualifications. Over 40% never engage in employment or any further education or training. One in three will gain a tertiary qualification but mostly at Level 1–4. Their employment rates just exceed 40% after 7 years, and as a group, their average earnings after 7 years at $18,000, are 40% less than those of the NCEA 1 group.[23]

The picture is slightly better for students leaving school with just NCEA Level 1. Even so, this category of students experiences persistent disadvantage in employment relative to those who gaining NCEA Levels 2 and 3. Seven years after leaving school, students with just NCEA Level 1 have employment rates and average earnings that are, respectively,10% and 15% lower than those of students with NCEA Levels 2 or 3.[24]

NCEA Level 2 is the gateway to many post-school study options, including those leading to trade certification at NZQCF Level 5 and higher. Industry training is more accessible to students with at least mathematics and English credits at Level 2. Some industry training requires other specific subjects at Level 2; for example, NCEA Level 2 physics is usually a requirement for electrician apprenticeships.[25] Retaining and engaging students at school for long enough for them to gain at least a Level 2 qualification

is therefore a key element of reducing the proportion who have NEET status.

Trends in qualification participation and achievement

Figure 1 shows the percentages of students leaving school in 2023 with each of the three NCEA levels and University Entrance (UE) as their highest attainment. About 9.5% of leavers had NCEA Level 1 as their highest qualification while another 16.5% left with no NCEA qualification at all. This means about a quarter of school leavers – those with no qualification or only NCEA Level 1 – are at risk of poor employment outcomes.

Subsequently some do go on to complete qualifications later and many find stable employment. Even so, if the proportion of New Zealand school leavers with at least a Level 2 qualification could be raised, the proportion at risk of NEET status after leaving school would be commensurately reduced. Instead, many of those students would then be in a position to take up industry training, improving both their life prospects and New Zealand's supply of skilled workers. Nevertheless, it would be a mistake to characterise an industry training-track in the senior secondary school as being primarily intended for disengaged students, or those not seen as 'academic.' Instead, it should be treated as a desirable pathway that all students are encouraged to consider.

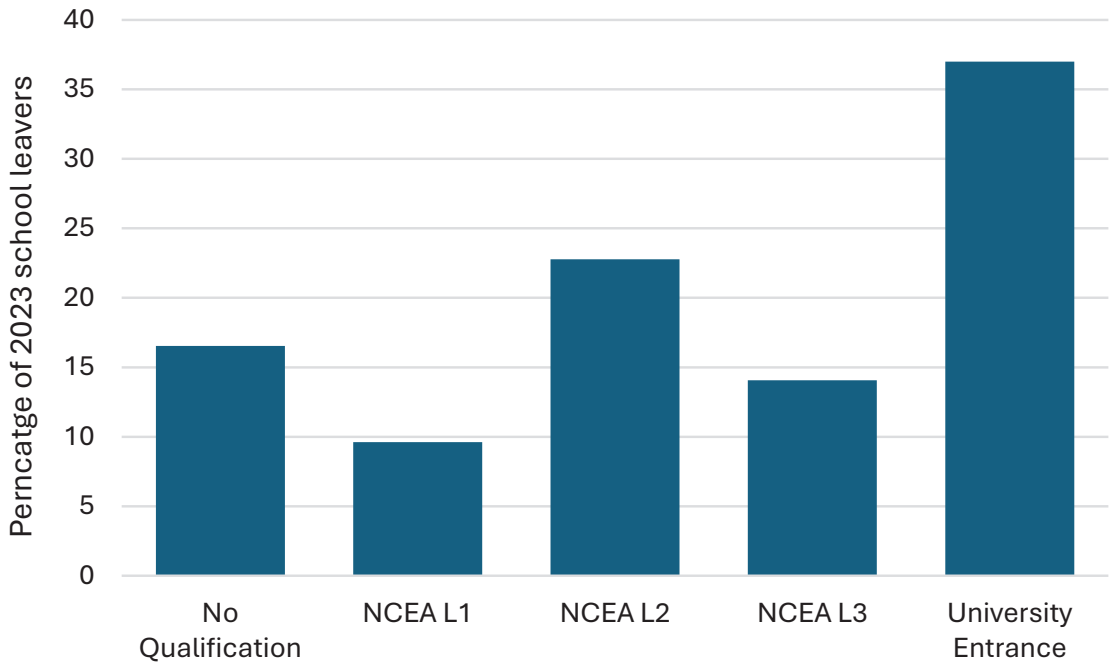

Figure 1: Percentages of school leavers in 2023 with each level of NCEA, with University Entrance as their highest qualification, and the percentage with no qualification.[26]

The data in Table 1 average the post-school activity of young people over the years 2020-2023. This conceals changing trends in the types and rates of post-school educational engagement among young people. Two important trends are evident over the past decade, especially since 2020: The proportion of school leavers undertaking sub-degree level study has decreased, and the proportion not engaged in tertiary education at all has increased.

Figure 2 shows the proportions of school leavers engaged in degree-level and sub-degree-level study, and those not engaged in further

education, from 2014 to 2023. During this period the percentage of school leavers commencing degree-level study within a year has remained relatively constant. There has been a downward trend in the percentage undertaking certificate- and diploma-level study and, conversely, a rise in the percentage not enrolling in tertiary education in the year after leaving school.

The decline in sub-degree-level qualifications is not mirrored by an increase in the proportion of school leavers undertaking university study.

Over the past ten years, degree-level study has been fairly stable (around 32%), barring a temporary uptick in 2021 (37%, coinciding with the pandemic); the 2023 level being only slightly lower than it was in 2014. On the other hand, sub-degree study (which includes industry training qualifications) has been consistently trending downward since 2014, from 32% to 25%. Disengagement from study has consistently increased from 35% in 2014 to 44% in 2023.

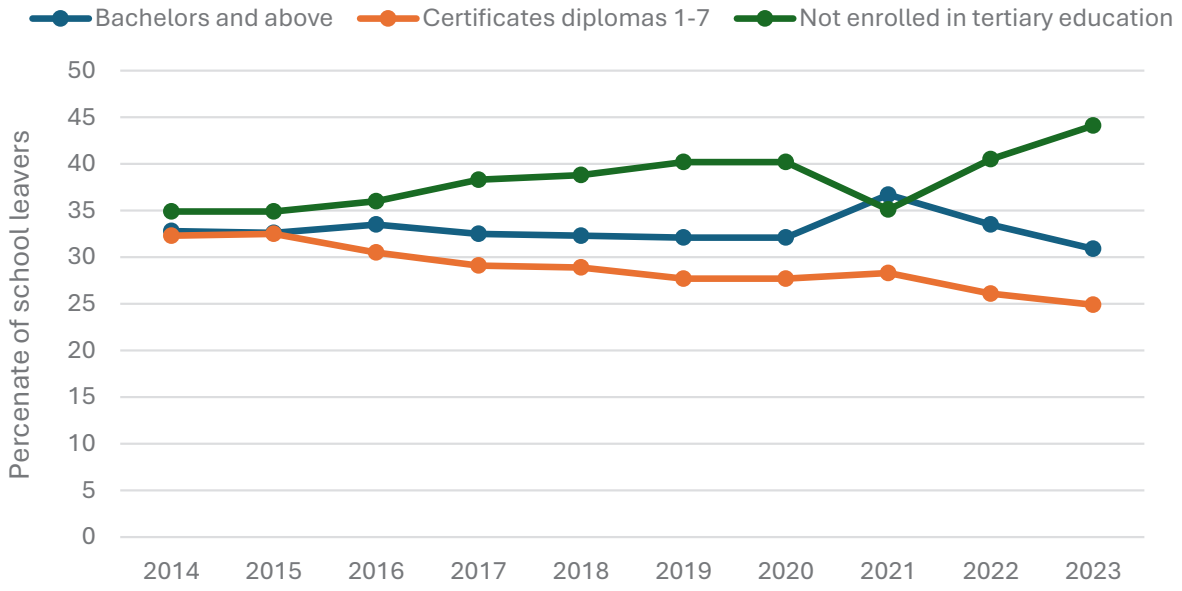

Figure 2: Percentages of school leavers entering degree-level programmes, diploma- and certificate-level programmes, and not undertaking tertiary study in the following year.[27]

The placement of trade qualification below degrees on NZQCF likely contributes to the comparatively higher regard and popularity of degrees. One solution to this would be to rethink the levelling of qualifications, to give equal status to trades qualifications and university. However, the types of knowledge and skills required to attain, say, a Bachelor of Arts and those required to attain, say, a construction industry qualification are very different. University study is largely focussed on academic disciplines, which are concerned with knowledge production. Industry qualifications certify the ability to apply knowledge and skills to the production of goods and services.

It may be that the project to produce a unitary qualifications framework (the NZQCF) including both trades qualifications and university degrees was misguided. The Scottish Credit and Qualifications Framework (SCQF)[28] takes a different approach. It represents higher education qualifications (university degrees) and apprenticeships separately, which avoids valuing one more highly than the other. The SCQF has 12 levels in total. Higher education

qualifications begin at Level 7 (Certificates of Higher Education) and culminate at Level 12 (Doctoral Degrees). Apprenticeships are levelled separately. They begin at Level 5 (Modern Apprenticeships) and also culminate at Level 12 (Professional Apprenticeships). This obviates any need to determine the relative sophistication of the knowledge and skills required to attain each type of qualification. We will return to this question in Chapter 7.

Drivers of school leavers' choices and opportunities

Improving outcomes for students at risk of achieving no qualifications at school, or only achieving NCEA Level 1, should be a priority. Nonetheless, focus on young people's choices of post-school education is also important. It may be that their choices are often constrained by lack of information and preparation or driven by assumptions and expectations that are not always justified. It is important that students have sound information regarding their post-school options and clear educational pathways towards them. If they do not, they are likely to follow the expectations of their parents and schools, or the behaviour of their peers, rather than pursuing other options that may be more in line with their aptitudes and interests. The most popular post-school study destination – university – leaves most graduates with a substantial debt. Many students may undertake university study without due consideration of its financial and opportunity costs, and of the relative merits of alternatives.

The high popularity of university study is attributable, in part, to its (partially justified) reputation for leading to high-income employment. Another driver is the clear pathway from school to university. There is a specific UE qualification and, historically, secondary schools have primarily focussed on teaching subjects derived from disciplines taught at university (science, mathematics, history, etc.). University is, therefore, a well-signalled post-school destination, but the pathway to industry training lacks comparable clarity. The senior secondary school is geared to the university pathway by default, and the industry-track pathway is all but invisible in most schools.

In 2023, 31% of school leavers enrolled in tertiary study at Bachelor level or higher. In 2022, their final year of school, 38% of this cohort attained UE.[29] Thus, more than 80% of students who attained UE enrolled in degree-level study, despite having other options available, including industry training. That suggests at least some of them undertake degree-level study simply because they can, or because they are influenced to do so by parents or peers, rather than because they have necessarily made a well-considered choice. In Germany, about 20% of school leavers who qualify to enter university undertake a dual training programme (see Chapter 2).

There is a strong socioeconomic gradient in UE attainment. Much higher proportions of students from schools in wealthier communities attain the qualification than students from schools serving communities with high levels of poverty. Just 9% of students from schools in the lowest of the Ministry of Education's seven equity index bands attained the qualification, compared with 74% in the highest band.[30] That suggests students' socioeconomic circumstances and educational preparation (or lack thereof) at school drive post-school study directions as much as their choices.

There are likely to be many students from disadvantaged backgrounds who would have the interest and aptitude to attend university, but who do not attain UE. That might be because schooling has not prepared them well enough, because they have not been provided with programmes of study that lead to UE, or because they do not see university as being for 'people like them'.

Improving genuine choice for young people must involve increasing the preparedness of students from disadvantaged communities to undertake university study if they wish. It must also improve pathways into industry training for young New Zealanders from all backgrounds. It is telling that New Zealand has nearly twice as many young NEETs as young industry trainees.

The very high rate of participation in Germany's dual training system (see Chapter 2) stands as proof of what is possible. If even half the rate of German school leavers' participation in industry and trades training could be achieved in New Zealand, it would transform many young lives and improve the skill-base of New Zealand's workforce.

Industry-track programmes must be made much more visible to secondary students and be better resourced. Over time, an increased popularity of industry-track programmes may lead to commensurate improvement in their perceived status, especially if that increase occurs across the socioeconomic spectrum.

CHAPTER 4

Existing pathways from school to trades training

A number of existing government programmes provide opportunities for New Zealand's secondary students and recent school leavers to engage in workplace-based education and industry training. These programmes are drawn together under the aegis of Youth Guarantee, a policy initiative established in 2008 by the incoming Key government. The Youth Guarantee suite includes the Youth Guarantee Fees-Free, Vocational Pathways, Trade Academies, Gateway and Secondary-tertiary alignment resource (STAR) initiatives.[31]

Youth Guarantee does not engage large proportions of students. In each year from 2020 to 2023, just 2.4% of young people in the 16–19 year-age range were involved (see Table 1). The low uptake is partly attributable to the positioning of Youth Guarantee programmes as alternatives for young people 'at risk'. For school age youth, this generally means those students who are not on-track to succeed in 'mainstream' schooling – largely defined by the pathway that culminates with UE. Regarding recent school leavers, this means those with NEET status and school qualifications no higher than NCEA Level 1. While this targeting provides important and valuable opportunities for these young people, it unfortunately also perpetuates the undervaluation of trade and industry qualifications relative to university qualifications.

The Youth Guarantee programmes do not, either individually or collectively, comprise a coherent pathway. They have been established over time, in a piecemeal manner, each with different provisions and requirements. They are essentially 'add-ons' to the default academic pathway and are subject to a restricted number of available places. Nevertheless, each initiative has valuable elements that could contribute to a well-signalled, coherent industry-track programme. This chapter provides a description and analysis of the five components of Youth Guarantee.

Youth Guarantee Fees-Free

Youth Guarantee Fees-Free is designed to assist young people aged 16–24 years obtain qualifications that lead to employment. It is targeted at school leavers who attained no qualifications at all or only NCEA Level 1 at school and are therefore at risk of falling into NEET status.

The Youth Guarantee Fees-Free Fund provides for up to two-and-a-half years of fees-free study at NZQCF Levels 1-3.[32] Utilising this funding does not decrease students' eligibility for the fees-free year of tertiary study available to all New Zealand students. Transport and pastoral care subsidies are also available under the scheme. The programmes funded under Youth Guarantee Fees-Free can include NCEA Levels 1 and 2 if they are aligned to Vocational Pathways (see following section).

Recent data on the uptake and success of Youth Guarantee Fees-Free are unavailable: The Ministry of Education ceased publishing evaluations of the programme in 2018[33]. The final evaluation report showed that, at that time, Youth Guarantee Fees-Free had very limited impact. [34] Four to five years after commencing the programme, Youth Guarantee Fees-Free

participants were no more likely to be employed than young people in a comparison group, matched on key characteristics. No changes to the programme have been made that would be likely to have improved that outcome. Youth Guarantee Fees-Free is failing to address the needs of young people who leave school with just NCEA Level 1 or no qualifications at all. In 2023, slightly more than a quarter of all school leavers were in that category.[35]

Youth Guarantee Fees-Free funding should be redirected to support a different approach; one that seeks to address the root cause rather than the outcomes. This would mean establishing a clearly signalled and well-resourced pathway in the mainstream school system with integrated workplace-based learning. Such a pathway may motivate young people who are currently disengaged from school education and equip them to succeed.

Vocational Pathways

Vocational Pathways are groupings of NZQCF unit standards designated as leading to qualifications and employment in six industry sectors:

- Creative Industries
- Primary Industries
- Service Industries
- Social and Community Services
- Construction and Infrastructure
- Manufacturing and Technology

The Pathways are not themselves programmes of study. Rather, they provide information to teachers and students about sets of unit standards reflecting preparation for each industry training area. These sets of standards also establish eligibility criteria for Youth Guarantee Fees-Free funding applications and define criteria for Vocational Pathways endorsements on NCEA qualifications. The Gateway and secondary-tertiary alignment resource (STAR) programmes (see below) are also either encouraged or required to align with them.

The NZQCF Level 1–3 qualifications funded under the scheme do not include industry training qualifications themselves, which are typically at Levels 4–6. Even so, students can receive Vocational Pathway Awards that recognise their attainment of sets of NZQCF credits associated with the pathways. The awards may help them secure employment or lead to industry training opportunities.

Vocational Pathways provide valuable information to schools and students and are inexpensive to administer. While they are a weak lever for strengthening industry-track education on their own, they could form the core of a coherent pathway from senior secondary education into tertiary industry training.

Trades Academies

In 2010, the *Education Act* was amended to enable students to be simultaneously enrolled at a secondary school and a tertiary provider (dual enrolment). Under this legislation, schools and tertiary institutions can partner to provide unified and coherent programmes of learning. These are known as secondary-tertiary programmes.[36] Those that focus on industry or vocational training are called Trades Academies. A large majority of current secondary-tertiary programmes, if not all of them, are Trades Academies, although this is not essential. There is nothing to prevent, for example, a secondary-tertiary programme involving a partnership between a school (or a group of schools) and a university.

Trades Academies is arguably the most successful element of Youth Guarantee. Most entail partnerships between a single tertiary provider (usually Te Pūkenga) and multiple schools. One

of the partners, designated as Lead Provider, oversees methods of delivery and administers assessment for qualifications.[37] There are currently 24 Trades Academies, with Te Pūkenga as the Lead Provider for 11 of them. There are 14 Lead Providers in total, nine of which are secondary schools.[38]

Students may spend all their formal learning time either at school or at the tertiary provider. Alternatively, they may split their time between the two. That affords considerable flexibility in the learning programmes that can be offered under the Trades Academies initiative.

Trades Academies are funded by the Tertiary Education Commission (TEC) on a per student basis. The funding is split between the participating institutions according to the proportion of time a student spends in each. Funding is allocated to Lead Providers for both general education and specific programmes leading to industry-specific or vocational qualifications. Lead Providers also receive funding to provide pastoral care, which is an expected component of the programmes. Overall, Trades Academy programmes are expected to focus students on gaining NCEA Level 2 with Vocational Pathway endorsements (discussed above).

Josh Williams and Arthur Graves have conducted engagement across the industry training sector on behalf of the Food and Fibre Centre of Vocational Excellence. They have published two recent reports on the secondary-tertiary interface for industry training.[39],[40] They report that, while Trades Academies are now well recognised and respected, it is difficult to gather information evincing their effectiveness. Like the Youth Guarantee Fees-Free programme, the Ministry of Education ceased formally reporting data on Trades Academies in 2018. Although an evaluation by the Education Review Office in 2015 was encouraging,[41] that evaluation is now nearly ten years old.

The links Trades Academies has established between secondary and tertiary providers enable students to pursue learning flexibly. Its link with Vocational Pathways is also a strength. However, the approach has seen limited uptake by schools and students, largely due to the ongoing domination of the senior secondary university-track education. A further factor is a lack of coordination between Trades Academy and workplace-based education, which is organised and funded under Gateway – a separate component of Youth Guarantee.

Gateway

The Gateway programme is administered by the TEC. It funds schools, on a per student basis, to arrange workplace-based learning for senior secondary students. It is expected to lead to assessment against at least 20 credits from unit standards associated with Vocational Pathways, and to contribute to participants achieving NCEA Level 2.

Gateway funding is contingent on schools and employers entering into agreements to deliver structured workplace-based education. The agreements place obligations on employers to ensure that students are not exploited. Those obligations are set out in individualised learning plans for each student. The TEC defines structured workplace learning as "a formal arrangement set in an actual workplace for a sustained period … to provide learners with opportunities to develop knowledge and skills required for future employment."[42]

Employers are responsible for providing the structured workplace-based learning stipulated in each student's learning plan. Schools are responsible for supporting students in their structured workplace-based learning and ensuring that it coheres with their school-based learning. Schools also manage the assessment of the unit standards associated with the relevant

Vocational Pathway. They are obliged to report to the TEC on the outcomes of assessments, and on other educational or employment-related outcomes for each participating student. Employers cannot pay school students for the work they do in their workplace-based education.

Williams and Graves report that Gateway attracts approximately 9,000 students each year, about 1,500 fewer than the number involved in Trades Academies.[43] While supportive of the intent of Gateway, they make three salient criticisms of its current arrangements. First, Gateway is administered by the TEC, whereas all other elements of Youth Guarantee are administered by the Ministry of Education. This causes much greater administrative complexity than necessary as schools wanting to coordinate Trade Academy and Gateway programmes have to deal with two separate agencies. Second, the prohibition on remunerating students for their time spent in the workplace inhibits the programme from developing into something akin to Australia's School-Based Apprenticeship initiative. Third, students cannot earn tertiary micro-credentials as part of their Gateway programmes and, as Williams and Graves point out, there is no sound rationale for this. Micro-credentials can contribute to NCEA and are valued by employers.

Gateway is a highly regarded and established programme. However, like Trades Academies, it has not substantially changed the educational status of the senior secondary school industry training-track or challenged the dominance of the university pathway. The lack of integration with the Trades Academy programme is a factor in this failure. Indeed, Gateway regulations explicitly rule out such integration, stipulating that Gateway funding cannot be used to fund to students' enrolment in tertiary courses.[44] This ring-fencing of funding is counterproductive to achieving a coordinated industry training pathway in the senior secondary school.

Secondary-tertiary alignment resource (STAR) funding

STAR funding is provided to schools by the Ministry of Education to support Year 11–13 students' transition to work or further study.[45] It can be used to expand students' learning programmes beyond those a school can provide itself. It is provided to schools as part of their operational grants at a rate of $925 per student for the first 30 students on a school's roll, and $163 for each additional student (2024 rates). Funding can be used to finance workplace-based learning or courses offered by tertiary providers. It is designed to help students explore their post-school options, rather than to engage them in full training or study programmes.

There is very little available information on the current effectiveness of STAR funding. Its most recent evaluation was published in 2003.[46]

Analysis of Youth Guarantee

Trades Academy and Gateway offer opportunities for students to pursue industry training with tertiary providers and in workplaces, respectively. STAR provides schools with additional funding to support either. Williams and Graves report that some students undertake Trades Academy and Gateway simultaneously.[47] They might spend part of each week with a tertiary provider on the Trades Academy programme and the rest in a workplace on Gateway. In these cases, the two programmes would normally be assessed using standards associated with the same Vocational Pathway. Taken together, this combination would collectively constitute a comprehensive industry training-track programme. It is cumbersome, however, to have to combine three separate elements of Youth Guarantee – Vocational Pathways, Trade Academies and Gateway – to enact it.

As Williams and Graves argue, New Zealand does not need more schemes and programmes that continue to position workplace-based learning at the bottom of the educational food chain.[48] Rather, the country needs a fully-fledged pathway into industry training for senior secondary students that is parallel to the university-track pathway. Such a pathway must integrate workplace-based learning as a normalised part of the school curriculum.

> Imagine a system where work-integrated learning is the norm, where schools enable young people to taste the industries they are interested in, where educators support employer to ensure that time on the job is a valuable and satisfying leaning experience, where the learner gets to understand the conventions and expectations of work, as well as the demands of the particular industry and occupation.
>
> Williams and Graves[49]

The low participation of students in Youth Guarantee programmes is partly due to their framing as second-class options for students who struggle with the default academic pathway. The historical and ongoing dominance of senior secondary education by a university-track curriculum, timetabling and staffing is very difficult for any industry training pathway to challenge. Too often, Youth Guarantee is seen as a way to provide credits towards NCEA qualifications, rather than to support genuine pathways to industry training.

The root cause is a cultural disparity in the value placed on industry training and university education by parents, many schools and teachers, and students themselves. Changing that culture will be a long-term project, requiring structural reform of the senior secondary school system. We will return to this in Chapter 7.

CHAPTER 5:

Case study – The BUSY School

The BUSY School is a non-profit organisation based in Queensland, Australia. It provides senior secondary education for students who have disengaged from mainstream schooling. Its aim is to prepare students for, and to transition them into, employment, including workplace-based industry training.

BUSY's educational model includes elements that should be included in any mainstream industry training-track programme for senior secondary schools. These include flexible timetables, a focus on work readiness, workplace-based education, and provisions for study with tertiary providers while enrolled at school.

The BUSY School offers a fulltime academic programme, consisting of on-campus and off-campus learning activities. Some BUSY students commence industry training while they are still at school. Others enter industry training after leaving school, well-prepared by the BUSY curriculum. A few obtain ATAR rankings (Australian Tertiary Admission Rank, Australia's equivalent of UE) and enrol at university when they graduate.

The BUSY school caters to students in Year 11 and 12 (the final two years of schooling in Australia). The first campus opened in Cairns in 2020. Since then, eight further campuses have opened across the state, with six in the greater Brisbane metropolitan area. In every case, the roll has filled quickly. The funding that flows from that success is used to open further campuses. The organisation is now looking to expand interstate and internationally, with plans to open campuses in New South Wales, Victoria, the United Kingdom, and Canada. Their first international campus opened in Auckland at the start of the 2025 school year.

Students are interviewed prior to entry to ensure that the schools can support their needs. BUSY does not accept students with needs that their schools lack the resources to address. This is an ethical position, rather than a commercial one. Their students have, by definition, disengaged from the mainstream system and BUSY does not take on students who are likely to experience further disengagement in the BUSY environment. BUSY principals make recommendations for alternatives to the families of students they cannot reliably support to achieve successful outcomes.

Resources for students

BUSY schools are independent (private) but do not charge fees. Many students come from families with very limited financial means. The organisation supplies uniforms, textbooks, and stationery free of charge, and provides food to students on the campus premises. Sometimes, they also pay fees for students to undertake training in tertiary institutions while still enrolled at school.

The BUSY school's campuses are deliberately small, with no campus exceeding a roll of 256. That enables them to maintain environments in which students do not feel lost or overlooked. This means that BUSY campuses cannot achieve the economies of scale that would be possible with larger rolls. They also maintain low student-teacher ratios, with one teacher for every 16 students. In addition to its teachers, each campus employs Work Readiness Officers, Employment Pathways Officers, and Youth Workers.

Work Readiness Officers focus on getting students ready to undertake workplace experience

and, eventually, workplace-based industry training. Their focus is on developing 'soft skills', such as self-presentation, punctuality, professional communication, and preparing employment applications. In conjunction with employment pathways advisers, they assess students' readiness to undertake workplace experience.

Employment Pathways Officers form and maintain relationships with businesses and liaise with them to place work-ready students. They also help manage relationships between students and employers, including supporting students to meet their workplace commitments, ensuring that they benefit from work placements and are not exploited.

Many of BUSY's Youth Workers are trained social workers. They ensure that students are well supported to succeed and provide them with pastoral care throughout their time at a BUSY school.

Funding

The resources for students described above are instrumental in The BUSY School's success. Provision of those resources make the BUSY model considerably more expensive per student than mainstream, public schools. Their independent, not-for-profit status enables them to receive the funding that makes the model possible.

BUSY schools are funded by both Federal and State Governments, with 80% of funding from the former, and 20% from the latter. State funding is available to all independent schools, with additional loadings, based on students' needs, from both Federal and State Government.

The state component is available to schools that support students with high needs or who are at risk of failure in mainstream schools. The BUSY School in Australia is not a charter model – Australia does not have charter schools.

The BUSY model

The first step for students newly enrolled students at a BUSY campus is to develop an Individualised Learning Plan and a Senior Education and Training (SET) Plan. These plans are negotiated between students, parents, and BUSY staff. They seek to capture students' goals and aspirations, and lay out achievable, manageable steps towards achieving them. The plans are subject to revision if students' aims shift as they develop skills and experience.

The core BUSY model is the same for all students, but the details are highly individualised. Students' timetables are customised to meet individual needs and advance them towards the goals laid out in their SET plans. Timetables are reorganised as necessary to make room for workplace-based learning and engagement with tertiary providers.

The initial focus is on ensuring that each student is work ready. This part of the curriculum is driven by the Work Readiness Officers. The time required to get students work ready varies greatly. While some need little preparation, most take a few months to acquire the habits of punctuality, self-presentation and conduct required in the workplace. For some students, especially those with very troubled backgrounds, acquiring work readiness takes most or all of their two years at a BUSY school. An important element of the work readiness curriculum is curriculum vitae (CV) preparation.

When a student is assessed as work ready, an Employment Pathways Officer seeks workplace opportunities for him or her. Once students commence the workplace-based component of the curriculum, their time is divided between in-school learning and workplace-based learning.

The standard model is two days per week in each setting, but this varies according to each student's circumstances and the agreement with the employer.

Employers commit to providing workplace-relevant training that is more than just work experience. As a central part of the curriculum, workplace-based learning is intended to be as relevant to each student's post-school aspirations as possible, although an exact match is not always possible.

For many students, an ideal scenario would be securing an apprenticeship while they are still at school. In such cases, students divide their time between in-school learning, workplace-based learning, and learning with a tertiary provider. For these students, BUSY meets the cost of the tertiary component. More commonly, students secure apprenticeships when they graduate from a BUSY school campus.

When students have been assessed as work-ready and secured work placements, the in-school curriculum focuses on supporting their workplace experience. This includes skills training, literacy and numeracy where necessary, and an ongoing focus on life skills and wellbeing. If there is an identified need for a student to acquire skills that the school cannot teach, students are given opportunities to engage with a relevant tertiary provider. They do not need to secure an apprenticeship to have a tertiary component in their programme. Again, BUSY pays for this component – the model is always fees-free for students.

Different BUSY campuses have different challenges and opportunities. Each BUSY campus adapts the core BUSY model to meet the needs of the community in which it is located. For example, the Ipswich campus is located in a fast-growing community on the outskirts of Brisbane. The community has a high level of intergenerational welfare dependence, and many students have no adults in their lives who have ever been employed. In this community, disengagement from schooling typically occurs early in the primary years. The Ipswich campus, therefore, places a strong emphasis on improving literacy, numeracy, and the work habits necessary to secure and maintain employment.

The Salisbury campus, on the other hand, is located in the middle suburbs of Brisbane. It serves students who find it difficult to fit into mainstream schools, who have been excluded due to misconduct or who have lost trust in the mainstream school system. Many of these students need support with mental health or are neurodivergent. A strong focus on building trust and creating an environment in which students feel at home is a hallmark of this campus and an essential foundation for learning and developing work readiness. This campus's Youth Workers play a vital role in this.

Lessons for establishing a mainstream industry training-track

The mission of The BUSY School is to reengage students who have struggled in mainstream schools and to prepare them for work or further learning. It is not a mainstream school; therefore, not all elements of its approach are relevant to mainstream schooling. Nonetheless, if mainstream schools were to adopt BUSY's approach to pastoral responsibility, it is likely that far fewer students would disengage in the first place.

Notwithstanding its core mission to address disengagement, the core structure of The BUSY School model can strongly inform the development of a mainstream industry training-track programme. Key elements include focus on work readiness and workplace education, integration with tertiary training, and flexibility in timetabling and curriculum structure.

Any school curriculum geared towards preparing students for industry training must have a focus on work readiness. If students go to university, they typically have three years in which to mature before they enter fulltime employment. School leavers commencing workplace-based industry training, however, need the basic skills and dispositions of employees much earlier. The BUSY approach of employing specialist Work Readiness Officers to teach and assess those skills and dispositions would be a valuable element in any school-based industry training-track.

BUSY's focus on workplace-based learning is another essential element, with Employment Pathways Officers playing a vital role in the success of this component. Crucially, workplace-based learning is treated as a core part of the BUSY curriculum, not an 'add-on' to in-school learning. As such, care is taken to integrate the workplace-based and in-school parts of the programme. This means ensuring that students learn and maintain the habits and dispositions of good employees and are supported in their development of skills gained in the workplace. Having staff dedicated to managing workplace-based education would be a valuable, if not essential, element of any industry training-track school programme.

Treating workplace-based learning as a core curriculum element is a major commitment and undertaking. It entails preparing students for the workplace, finding them work placements, and ensuring that workplace education is valuable for both students and employers.

Finding placements for students can be challenging. If it is a core curriculum element, then it must be done for every student who is work ready. Building and maintaining relationships with employer-partners is crucial; without their goodwill, the programme could not run. An important part of maintaining goodwill is ensuring that students add value in the workplace and do not impose undue burdens.

It is not the core business of most employers to provide workplace-based education, and most employers are not educators. They need support to ensure that work placements are truly educative and not merely generic 'work experience'. Schools overseeing such programmes have a duty to ensure that their students receive high-quality training and to integrate that training with students' in-school programmes.

Schools are not resourced to provide all the training students might require, to prepare them for industry and trades training. Enabling students to engage with other education providers, especially tertiary providers, is an efficient way to address gaps in a school's capabilities.

A curriculum in which workplace-based education and studying with other providers is commonplace requires much more timetable flexibility than a traditional, in-school curriculum. Hours of employment will inevitably vary, as will the time requirements of programmes with alternative providers. Much more curriculum flexibility is also required. While industry training-track curricula should include core components, different students inevitably need to acquire different skills specific to their industry training.

The BUSY School case study shows how different an industry training-track programme is from a traditional academic-track programme. Such differences would make it difficult for smaller mainstream schools to do full justice to both. Arguably, to achieve parity of esteem between vocational and academic training, it is necessary for schools to specialise in one track or the other. Recommendations to enable such specialisation are made in Chapter 7

CHAPTER 6:

Industry and trades training in New Zealand

In New Zealand, industry and trades training that involves both workplace-based and institution-based training is governed by the TEC through New Zealand Apprenticeships.[50] Te Pūkenga provides the institution-based component of training for most apprenticeships. Some private training establishments are also involved in specialist areas (e.g., boatbuilding). The TEC lists 246 occupations associated with New Zealand Apprenticeships.[51] These occupations are organised into the same six industry categories as Vocational Pathways (see Chapter 4).

New Zealand Apprenticeships are guided by training plans, agreed to by each apprentice, his or her employer, and the tertiary provider responsible for the off-job training component.[52] Apprenticeship training agreements document training and assessment arrangements, stipulating the qualification the apprentice is working towards and how they will be assessed. They also detail the skills and competencies the apprentice is expected to acquire, and the training process by which those skills will be taught. Finally, they include review and reporting frameworks for each apprentice with milestone achievement targets.

Training plans do not stipulate pay or employment conditions; those are covered by an employment agreement between the employer and apprentice. Employment agreements also include training agreements, which stipulate employers' expected contributions to apprentices' training.

New Zealand Apprenticeships must be designed to lead to a qualification or qualifications totalling at least 120 credits (1,200 notional hours of learning). If the apprenticeship leads to a single qualification, it must be at Level 4 of the NZQCF, and if it leads to more than one, they must be at Levels 3 or 4, with at least 60 credits at Level 4.

New Zealand Apprenticeships are open to anyone aged 16 years or over who can secure an employer willing to train them. Many senior secondary students would therefore be eligible to undertake apprenticeships, were it not for the prohibition on school students being paid for activities related to formal education.

Apprenticeship Boost

Historically in New Zealand, employers were not funded to train apprentices. However, in 2020 the Ardern government introduced Apprenticeship Boost, which provides funding for employers for the first two years of an apprenticeship.[53] The fund is administered by the Ministry of Social Development. Its initial purpose was to assist employers to recruit and retain apprentices while economic activity was disrupted during the COVID pandemic. Apprenticeship Boost was intended as a temporary measure, set to expire in 2022. It was extended, but at only half the rate. It currently pays employers $500 per month for each apprentice.

In 2024, the Luxon government announced changes to Apprenticeship Boost, to take effect from 2025. These changes include a reduction in the period for which the funding is available

– from two years to one – and it will only be available for apprenticeships in industries with skills shortages.[54]

Between 2014 and 2018, apprentice numbers were relatively stable between 50 and 60 thousand each year.[55] Figure 3 shows the numbers in each year from 2018 to 2023.

Although there was an increase between 2018 and 2019, before the initiative was introduced, its magnitude was in line with fluctuations since 2014. There was a marked increase in 2020, however, coinciding with the introduction of Apprenticeship Boost, and further increases in 2021 and 2022. In 2023, after the rate had been reduced, the numbers fell back. These data suggest that Apprenticeship Boost positively impacted participation in apprenticeships. It remains to be seen what effects the changes scheduled for 2025 will have, but it seems likely numbers will fall further.

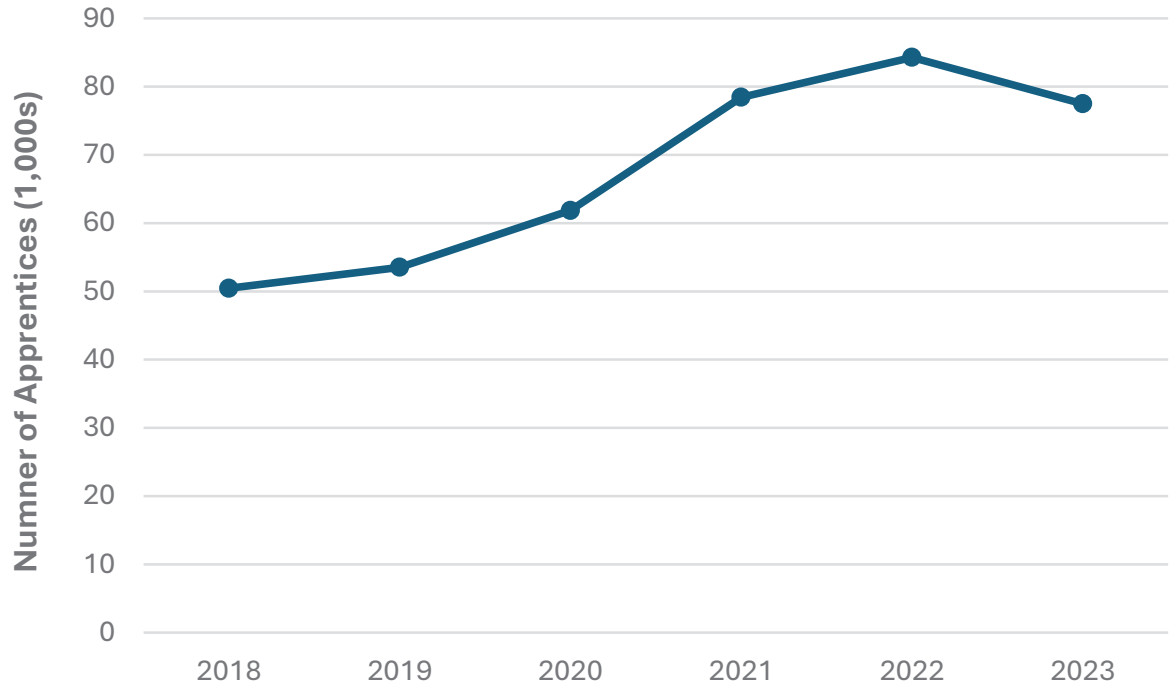

Figure 3: Numbers of New Zealand Apprentices (2018-2023)[56]

Assuming the increases from 2020 to 2022 reflect the effect of Apprenticeship Boost, it may be inferred that employers have capacity to take on apprentices, but that many do not see sufficient value in doing so without subsidies. Apprenticeship Boost is expensive and, given current constraints on government budgets, it is uncertain whether any further government-funded wage subsidies for workplace-based industry training will be forthcoming. In Chapter 7, a more durable solution to this issue is explored.

Training institutions

At the time of writing, there is significant uncertainty about the future of New Zealand's tertiary education system. Te Pūkenga, the network of polytechnics and training institutions established in 2020 under the Ardern government, is in the process of being disestablished. The university sector is also under review by a University Advisory Group.[57]

Te Pūkenga brought New Zealand's 16 polytechnics and eight of its 11 industry training

organisations together into a national network. One intention of the merger was to introduce greater financial stability to a system dogged by deficits accrued by individual polytechnics. Another was to create a single point of contact for employers and students involved in tertiary skills training.[58]

The intended efficiencies did not eventuate and, in late 2023, the incoming Luxon government announced an intention to disestablish Te Pūkenga. It will be replaced with a network of five or six polytechnics and institutes of technology. These organisations will initially remain under Te Pūkenga, albeit with greater autonomy. The individual polytechnics and institutes are scheduled to become fully autonomous in January 2026. In September 2024, Tertiary Education Minister, Penny Simmonds, signalled that significant financial austerity will be required to restore financial viability to the sector.[59]

The business case for Te Pūkenga was dubious from the outset and unwinding it will potentially avoid throwing good money after bad. Nonetheless, the de-merger alone will not solve New Zealand's skills training problems in the long term. That will require mechanisms to improve funding without undue impost on the public purse. In Chapter 7, recommendations are made for a more far-reaching reform of the funding model for the tertiary training sector.

Workforce Development Councils

In 2019, then-Education Minister Chris Hipkins announced an intention to establish new Workforce Development Councils (WDC) as part of the Reform of Vocational Education programme.[60] Six WDCs have now been established.[61] The industry areas for which each Council is responsible largely mirror the six Vocational Pathways for secondary students (see Chapter 4).

These industry areas are:

- Creative, Cultural, Recreation, and Technology Industries
- Food, Fibre and People
- Services
- Community, Health, Education and Social Services
- Construction and Infrastructure
- Manufacturing, Engineering and Logistics

The roles of the WDCs include "setting standards, developing qualifications and helping shape the curriculum of vocational education".[62] They inherited these roles from the industry training organisations which, although disestablished in 2020, continue in a de facto capacity as business divisions of Te Pūkenga. The WDCs comprise representatives of "employers and employees in the … industries covered", as stipulated in Section 363(3a) of the *Education and Training Act (2020)*.[63]

The way the WDCs are currently constituted limits their utility for improving either pathways into industry training or industry training itself. They have very little, if any, influence on the senior secondary school curriculum. Furthermore, Council membership is by ministerial appointment, which politicises the Councils. For example, the current WDCs, largely appointed under the Ardern government, have a heavy emphasis on Māori business and iwi development. Politicisation limits the extent to which the Councils can reflect industry expertise, needs, and viewpoints.

The WDCs look unlikely to continue in their existing form, with no funding projected beyond 2024/25 in Vote Tertiary Education.[64] This affords an opportunity to reestablish them in a new form, to better reflect the needs of industry and give them an explicit role in improving the secondary-tertiary interface for industry training. This option is elaborated in Chapter 7.

CHAPTER 7:

Designing a coordinated industry training system for New Zealand

In this final chapter, recommendations are made for improving the pathways for young New Zealanders into industry training and for raising its cultural esteem and quality. The aim is not for industry training to supplant university degrees as the post-school destination of choice for young people. Rather, it is to ensure that young people see the possibility of industry training alongside university. Additionally, public investment in industry training must address labour market skills shortages and aim to increase workforce productivity.

Young people – and the country – would benefit if senior school students were supported to make more informed choices about their future and were better prepared by their schooling to pursue those choices. Those choosing to pursue industry and trades training would benefit from a well-coordinated and well-resourced system. Such a system would require better integration of institutional and workplace-based learning at school level, and streamlining the secondary-tertiary interface.

The good news is that many of the elements of a high-quality system are already in place. In Chapter 4, the Trades Academy and Gateway initiatives, as well as other elements of Youth Guarantee, were discussed. The former enables secondary students to undertake workplace-based learning, and the latter, dual enrolment at school and tertiary institutions. However, the piecemeal nature of Youth Guarantee, its framing as a second-class option for students who struggle with academic programmes, and the hegemony of the university pathway, all limit its effectiveness.

Post-school, the New Zealand Apprenticeships programme provides a coherent, workplace-based pathway to qualifications in trades and industry. Apprenticeship Boost was introduced in 2020 as a temporary measure to support employers to retain trainees and take on new ones during the COVID epidemic. It increased the numbers of young New Zealanders in workplace-based industry training. Its success showed that, prior to its implementation, many employers had untapped capacity to take on additional trainees but did not do so, presumably because the business case was not strong enough.

Apprenticeship Boost is still in place, but it has been wound back. In 2022, the funding available to employers through the scheme was halved, and in 2024, its availability was restricted to industries suffering skills shortages. The effect of these cuts on the volume of trainees in New Zealand Apprenticeships remains to be seen, but a reduction seems likely. A durable set of incentives for employers to recruit workplace-based trainees that minimises costs to the taxpayer should be developed. Beyond incentives, spending on apprenticeships should be seen as an investment in improved systems performance and monitored accordingly.

Secondary school initiatives

Some New Zealand schools organise industry training-track programmes in conjunction with local business. An example is P-TECH[65], an international initiative that involves partnerships between schools, technology companies, and tertiary training institutions.

In New Zealand, one P-TECH partnership involves Manurewa College, Aorere College, Manukau Institute of Technology, The Warehouse Group, and IBM.

The P-TECH model includes features of high-quality industry training-track school programmes. It integrates secondary and tertiary components and includes workplace education. Partnering companies provide mentoring for students.

In New Zealand, programmes like P-TECH rely on particular principals and teachers initiating and maintaining them. As Williams and Graves say, "these are pockets of innovation rather than default behaviour, or a strategic response".[66]

Relying on the initiative of individual schools to establish pathways to industry training is not a viable national policy approach. More needs to be done at the senior secondary level, and things need to be done differently, if the status and uptake of post-school industry training is to be substantially improved.

At the national level, the proliferation of programmes creates a confusing quagmire – "a clutter of schemes", as Williams and Graves put it[67] – for schools and students to navigate. This report echoes their call for a unitary, coherent framework, bringing education and industry together to provide a well-resourced and well-signalled pathway.

The low participation of school leavers in industry training is partly attributable to a national culture that affords high status to university qualifications and lower status to industry qualifications. This has resulted in low uptake of industry training by young New Zealanders. Arguably, many school leavers enrol in university programmes without due consideration of an alternative to which some may be better suited.[68]

In designing a coherent comprehensive pathway for aspiring industry trainees, the ramifications of the high cultural esteem placed on university degrees must be addressed. The most important is the strong gearing of schools towards university preparation as the default setting. The secondary curriculum is dominated by subjects derived from university disciplines. That is justified for Years 1-10, for which the New Zealand Curriculum is compulsory. All students are entitled to be taught to read, write and to understand mathematics to a level required for participation in New Zealand's economy and democratic society. They are all also entitled to be taught the universal knowledge produced by subject disciplines, and to benefit from the cognitive development that results from such learning. However, from Year 11, the current hegemony of university-related subjects is not justifiable. At this stage, students should be able to make informed choices about their post-school directions and have clear pathways available to enact those choices.

The gearing of most secondary schools to university-track education is exacerbated by the existence of UE, a qualification (formally, an award) specifically designed for those who attain it to enrol in degree-level study at university. There is no equivalent qualification for entry into industry or vocational training. While NCEA is flexible enough to credential industry-track study, it is a generic qualification and used mainly to credential achievement in university-track subjects. A well-designed qualification signalling preparation for industry training would help change the widespread perception of university as the default post-school destination. It would provide a clear goal for school students interested in industry training, and support schools to develop programmes for those students.

Vocational pathways offered by secondary schools tend to be treated as add-ons to university-track education rather than being afforded the same priority. They are almost

universally seen as ways to keep otherwise disengaged students at school and get them to qualifications. While that is certainly a worthy aim – and the *raison d'etre* of The BUSY School (see Chapter 4) – it does nothing to raise cultural esteem for industry training pathways. Establishing training pathways as fully legitimate options for all students will be necessary if parity of esteem between university- and industry-track pathways is to be achieved.

Specialisation in the senior secondary system

Logistically, it would be difficult for most schools to do justice to both university preparation and preparation for industry training. Both staffing and timetabling present challenges – typically, the teachers most qualified to teach a university-track curriculum are not those most qualified to teach an industry-track curriculum. The New Zealand Curriculum is compulsory for Year 1-10 and is heavily focussed on subjects (learning areas) derived from academic disciplines. Schools can, therefore, typically employ the same teachers to teach curriculum subjects in Year 9 and 10, and university-track programmes in Year 11 to 13. Adequate resourcing of both university-track and industry-track programmes in Years 11 to 13 would most often require additional staffing except, possibly, at very large secondary schools.

Timetabling presents another challenge to schools wishing to do full justice to both industry-track and university-track programmes. Industry training preparation requires considerable timetable flexibility to enable students to undertake workplace activities and attend tertiary training institutions. University-track study is better served by traditional school timetables, organised into time periods dedicated to teaching disciplinary subjects. Managing both kinds of timetabling without compromising either track would be a major challenge, particularly for small and medium-sized schools.

Enabling schools to specialise either in preparing their students for university or for industry training would mitigate both staffing and timetabling issues. Such specialisation would require a high degree of coordination between geographically proximate schools and agreement on specialisation arrangements if both pathways are to be equally available to all. To follow their chosen pathways, students would need to be able to seamlessly move between schools after Year 10.

Specialisation arrangements should not preclude the possibility of graduates of industry training-track schools enrolling at university. For example, it would be appropriate for a school specialising in preparing its students for the construction industry to also offer a pathway to degree-level study in architecture. Specialisation should not be so rigid that students are locked into a narrow field.

Over-specialisation can be avoided in two ways. First, schools should recognise that elements of 'academic' education are necessary for preparing students for industry. Second, dual enrolment can be used to mitigate the limitations of schools' resources. Students should be facilitated to undertake study in areas not offered by their school, either at another school or at a tertiary provider.

Existing school governance arrangements do not facilitate the level of inter-school cooperation and collaboration necessary to enable specialisation across schools. Under the Tomorrows Schools reforms of 1989[69], every school is an independent Crown entity with its own Board. Each school is funded according to its roll, setting up geographically proximate schools to compete for students. It is difficult to see how the system-wide degree of cooperation required to deliver equitable access to a dual pathway system could be achieved under these arrangements.

In a forthcoming report for the New Zealand Initiative, an alternative to the Tomorrows Schools organisational arrangements for New Zealand's school system will be proposed.

The scope of this proposal goes well beyond the provision of a dual pathway in the senior secondary system. It will encompass school governance, reform of initial teacher education, the provision of teachers' professional development and specialist education services, the locus of school accountability, and educational measurement and data sharing. A full description of that proposal is well beyond the scope of this report. The description herein is limited to those elements necessary to support dual tracks towards either university or industry training.

At the core of the proposed reorganisation is a new tier of governance and provision of educational services comprising communities of schools. The proposed structure has both similarities and differences to the 'hubs' proposed by the Tomorrows Schools Independent Taskforce that reported in 2018 to then-Minister of Education, Chris Hipkins.[70] For present purposes the nomenclature of 'hubs' is retained.

Hubs, rather than individual schools, would become the locus of accountability to government. They would be organised such that each encompasses a broad spectrum of socioeconomic circumstances. They would also be organised such that secondary schools were, to the greatest extent possible, grouped with the primary schools that feed into them. In this way, the schools comprising each hub would have strong incentives to work together. Funding would be provisioned by closing the regional offices of the Ministry of Education and greatly paring back its central office.

Ideally, the year-level structure of schooling would be rearranged, with Years 0 to 6 being primary school (as at present), Years 7 to10 being middle school, and Years 11to13 being senior school. This structure would enable senior schools to focus on preparing students either for industry training or for university.

In areas too remote to have more than one secondary school accessible to students, specialisation would not serve the choices of all students. Additional funding may be required for remote secondary schools to run both industry-track and university-track programmes, when there are no other accessible schools.

Better information should be provided to students in Year 10, to inform their decisions about their future pathways. The Integrated Database Initiative (IDI) could be put to excellent use in this regard. The IDI holds detailed data on every New Zealand resident across all areas of government administration, including education and employment. It could be used to analyse the ten-year outcomes of students undertaking training in each industry sector, and those undertaking university study in each disciplinary area (science, arts, law, etc.). Taking into account the average cost of study, average debt on graduation, and average earnings of graduates, it would enable students to make much more informed choices than they typically can at present.

Recommendations:

1. Establish cooperative arrangements between secondary schools that enable specialisation at Years 11–13, either in preparation for university, or for industry training and other vocational training. These arrangements would facilitate students' transitioning from Year 10 to a school catering to their post-school goals.
2. Provide funding for schools to develop and establish specialisation in industry training and vocational education programmes.
3. Undertake a ten-year longitudinal analysis of student outcomes following a wide variety of tertiary programmes in both industry training and university programmes. Publish the results to inform students' choices in senior secondary education and beyond.

Senior secondary curriculum

The curriculum of schools specialising in industry training-track education should include both school-based and workplace-based components. It should normalise dual enrolment at a school and a relevant tertiary provider. Dual enrolments at more than one school might also be commonplace for students needing elements of university-track education to pursue their aspirations. For example, students wanting to undertake electrical trades training benefit from achieving certain standards in physics.

The goal of industry training-track education should be to prepare students for New Zealand Apprenticeship programmes. It should also include provision for students to commence those programmes while they are still enrolled at school.

Three elements of Youth Guarantee – Trade Academies, Gateway, and Vocational Pathways – should form the core of the industry training-track curriculum. This would make the current distinction between these three elements, and Youth Guarantee itself, redundant. They would simply be features of the school curriculum for the industry training-track curriculum.

Workplace-based education would be a central element of this curriculum. Schools would seek work placements for students. Where possible, work placement should be relevant to students' school-based (and, potentially, tertiary-provider-based) programmes of study. Schools would be responsible for ensuring that all students beginning the workplace-based element of the curriculum are work-ready. This would include preparing them with the necessary skills, including sufficient literacy and numeracy to complete assigned tasks. It would also include supporting them to gain the habits of punctuality and self-presentation, and conduct required in the workplace. The BUSY School, discussed in Chapter 4, provides a model for this. Schools would also mediate workplace disputes, ensure that students were not exploited, and deal with any issues of student workplace misconduct. Securing and maintaining the goodwill of employers would be essential to the success of this initiative.

Ideally, a stipulated number of hours spent in relevant workplace-based education would be a compulsory requirement for the proposed National Certificate of Industry Training (see Recommendation 6). However, the feasibility of this would depend on workplace opportunities being sufficiently available to accommodate all work ready students.

At present, it is not lawful for school students to be paid for work undertaken as part of their educational programmes. Employers, at their discretion, should be enabled to pay students in workplace-based learning a school training wage at a set rate. Australia and Canada both make provision for school students to be paid for participating in workplace-based education. This enables school students in those countries to commence part-time apprenticeships while still enrolled at school.

Inevitably, the workplace training available to students would depend on the nature of the businesses within travelling distance of their schools. That, in turn, would limit the Vocational Pathways schools could support. An inevitable though undesirable consequence would be that students may not always be able to pursue their chosen Pathway. However, the vocational track undertaken at school should not necessarily lock students out of their chosen pathways following graduation. There are various ways in which this issue could be addressed:

- If a school had the resources to support a student's preferred Pathway, but no relevant work placement was available, the Pathway could be completed entirely at the school. In these cases, a workplace-based component could be undertaken with an employer in

a different business domain and focus on developing general workplace competencies.

- If a school could not itself support a particular Pathway, students could enrol with a tertiary provider under dual enrolment provisions for training. Again, a workplace-based component might be undertaken with an employer in a different business domain if one relevant to the Pathway was not available.
- Students might undertake Pathways other than their preferred ones while at school and pursue their preferred choice through a New Zealand Apprenticeship after graduation. The school would ensure that these students received any requisite preparation for that apprenticeship. Again, this might involve dual enrolment with an appropriate tertiary provider.

Recommendations:

4. Bring together the Trades Academy, Gateway and Vocational Pathways elements of Youth Guarantee to form the core of a curriculum for schools specialising in industry training-track education.
5. Redirect Youth Guarantee Fees-Free funding to contribute to a mainstream senior secondary pathway with integrated workplace-based learning and opportunities for dual enrolment with tertiary providers.
6. Enact legislative change to enable students to be paid for work undertaken as part of school-based industry training.

Qualifications

The three levels of New Zealand's NCEA were progressively introduced between 2002 and 2004 as the dominant qualifications system for senior secondary schools. NCEA replaced the School Certificate and University Entrance/Bursary system in place, in various configurations, for many decades.

A major rationale for NCEA was to bring about 'parity of esteem' between academic and vocational programmes in the senior secondary school. Unlike the previous qualifications system, which centred on subjects derived from disciplines taught at university, NCEA is a 'multi-pathway' qualification. It is achieved by accumulating credits from small units of assessment called 'standards', rather than by passing high-stakes examinations assessing whole subjects. Credits can be drawn, interchangeably, from standards designed for academic subjects, or from those designed to assess skills relevant to industry training. Broadly, the former are known as *achievement standards*, and the latter as *unit standards*.

NCEA has been widely criticised for fragmenting the curriculum, encouraging superficial learning, and engendering a 'credit farming' mentality in students and schools. These criticisms are comprehensively summarised in a 2018 report by Briar Lipson for The New Zealand Initiative.[71] The present analysis will focus on a failing of NCEA that has previously largely been overlooked – its failure to bring about 'parity of esteem.'

More than 20 years after NCEA was introduced, little progress has been made in improving the status or uptake of industry training-focussed pathways in schools. As we saw in Chapter 3, more than five times as many school leavers enrol at university, and almost twice as many become NEETs, as those who undertake industry training.

Arguably, the failure of NCEA to meet its objective of engendering parity of esteem for vocational programmes is attributable to its generic nature. While UE provides a clear pathway to university, there is no similarly well-signalled pathway into post-school vocational education.

NCEA is attained by accumulating 60 credits (80 for Level 1) from any field, from physics, to visual arts, to bricklaying, to occupational health and safety. Crucially, there is no requirement that the

assessments for those credits are underpinned by a coherent course of study. In contrast, UE is a single-purpose qualification, requiring at least 14 credits in each of three disciplinary subjects.

The existence of a special-purpose qualification for university admission and the absence of one for industry training pathways, makes the former track much more salient for schools and students than the latter. Arguably, it also perpetuates the strong curriculum emphasis on academic subjects in the senior secondary school, at the expense of much emphasis on preparation for industry training.

One solution to the disparity in school-level qualifications leading to university eligibility, and those leading to industry training, would be to abolish UE, leaving only NCEA to accomplish both kinds of credentialling. This was the approach suggested in a 2017 report from the Productivity Commission.[72] According to the Commission's report, "University Entrance does not reliably signify preparedness for higher-level study. It also implies that a young person who achieves University Entrance is best off attending a university, when this may not be the case".[73]

The Commission is correct on the latter point. A combination of (unwarranted) disparity of esteem between university study and industry training, historical and ongoing gearing of the senior secondary curriculum to subjects derived from university disciplines, and a specialised UE credential, establish university as the default post-school destination. However, contrary to the assertion of the Productivity Commission, UE *does* signal preparedness for "higher-level study", if we take that to mean study at university.

Analyses conducted at Victoria University of Wellington show that the number of UE-approved subjects in which students attain at least 14 credits is predictive of their grade point average in their first year of university study.[74] That is so, even after controlling for students' total number of credits in UE-approved subjects. In other words, students with profiles of Level 3 credits that reflect wide coverage in specific subjects do better at university than those with narrower coverage in greater numbers of subjects. That lends validity to the UE requirement for at least 14 credits in at least three approved subjects.

Abolishing UE as the Productivity Commission recommended would not make much, if any, difference to the greater popularity of university over industry training. For one thing, it would be unlikely to alter the long-standing cultural preference for university degrees over trades qualifications. The curriculum focus on discipline-based subjects in the senior secondary school would remain in place. For another, it would almost certainly be replaced by a similar or identical requirement for university admission imposed by the universities themselves. At worst, different universities would impose their own criteria, leading to a proliferation of requirements for schools to manage. More likely, Universities New Zealand would simply adopt the existing UE requirement for all universities. The result for schools and students would essentially be the status quo.

Even if the abolition of UE successfully 'levelled the playing field' between university- and industry training-track programmes in the senior secondary school, this would occur by removing a clearly signalled pathway for one destination, rather than establishing one for the other. It would leave NCEA in place as a generic qualification with all of its attendant problems. Instead of abolishing UE, greater parity for industry-track pathways could be established by introducing an Industry Training qualification, underpinned by a coherent curriculum. Doing so might render generic NCEA qualifications redundant.

The qualification should be based on the Vocational Pathways. The pathways could be expanded to include Level 3 standards to

provide adequate assessment for Year 13 students. Attainment of a requisite number of credits in a pathway should result in the award of a full qualification, rather than a 'badge' on an NCEA qualification. The qualification should include the same literacy and numeracy requirements that are currently in place for NCEA.

Beyond NCEA, a further factor in the ongoing poor esteem for industry and trades qualifications relative to university qualifications, is that the former are levelled lower on the NZQCF than the latter. There is no valid basis for this. From an epistemic perspective, industry skills are incommensurable with knowledge production disciplines (notwithstanding some overlap in their knowledge bases).

A more even-handed approach would be to follow the Scottish Credit and Qualifications Framework and to level higher education qualifications (university degrees) separately to trade and industry qualifications. Doing so would avoid explicitly valuing the former more highly than the latter, contributing to parity of esteem.

Recommendation:

7. Establish a National Certificate of Industry Training at Level 3 on the NZQCF based on configurations of unit standards recognised by industry bodies as certifying readiness to undertake industry training in specific trades. The existing Vocational Pathways provide a starting point for developing such a qualification.
8. Level university degrees separately to trade and industry qualifications on the NZQCF to avoid explicitly valuing the former more highly than the latter.

Post-school initiatives

As we have seen, the main issues for establishing a robust pathway from school to industry training are structural. The default gearing of the secondary school towards university preparation is foremost among these. That is exacerbated by the higher cultural value placed on university study than on industry training.

Post-school, the issues are less structural and relate more to resourcing and incentives. The main institutional provider of industry and trades training, Te Pūkenga, currently runs an unsustainable deficit. When it is disestablished in early 2026, it is not expected that many of its successor organisations will be financially stable. More resourcing is required to ensure the long-term viability of industry training institutions and to improve the quality of the training they offer. At present, the government is not well placed to provide these resources, having a structural deficit of its own to contend with.

Data presented in Chapter 3 showed that school leavers entering university outnumber those undertaking industry training by more than five to one. It is likely that many students enter university based on a cultural narrative about the status of university degrees. There is an opportunity to use funding levers in a way that is cost-neutral to the government to shift incentives away from treating university as the default option: The institution-based component of all New Zealand Apprenticeships could be made fees-free, funded by means testing the fees-free year for university against parental income, and reinstating interest on student loans.

Employers also need more incentives to take on trainees for the workplace-based component of New Zealand Apprenticeships. Apprenticeship Boost provided such incentives and was successful in increasing numbers in the programme. However, that programme imposes a substantial impost on the public purse and funding has now been reduced by half that originally provided and is restricted to areas of skills shortage. A new method of providing

incentives to employers to take on apprentices is required.

Training institutions

New Zealand's industry training institutions are in financial crisis. A new funding model is necessary to stabilise the organisations that will succeed Te Pūkenga when it is disestablished in early 2026. Given the current pressures on the government budget, this model must be as cost-neutral as possible. The funding currently directed into universal entitlement to a year's fees-free study at tertiary institutions provides a potential mechanism for this. It also provides a mechanism to shift incentives for prospective students away from university study, towards industry training.

In 2017, the incoming Ardern government established a 'first-year fees-free' policy. Under the policy, all resident students studying at any New Zealand tertiary institution had their first year of study fully subsidised by the government. The policy did very little to increase enrolments at universities.[75] In 2023, the incoming Luxon government announced that, from 2025, the fees-free year would be shifted to the final year of each programme of study.

One option to provide greater resourcing to industry training institutions, and to change incentives for prospective students, would simply be to end fees-free study for university programmes and make institutional training associated with New Zealand Apprenticeships entirely fees-free. However, this would disadvantage university students from lower socioeconomic backgrounds. These students are already greatly underrepresented in university cohorts. Rather than entirely abolishing the fees-free year for universities, it could be means tested on parental income. Students meeting the means test criteria could have their entire degrees funded fees-free. That would provide an incentive for students from less well-off families to enrol at university. The level of the means test could be set to deliver cost-neutral outcomes.

Further funding could be found by ending interest-free student loans. That would enable the government to free up limits on the amounts that could be borrowed. It would also create an incentive for graduates to repay their loans more rapidly than they currently do and are legally required to. Making loans interest free creates the opposite incentive – to pay them down as slowly as possible.

The preferential funding policy in favour of industry training should be viewed as a temporary measure to bring about a much-needed culture shift. If students who might otherwise have enrolled at university can be attracted to industry training instead, over time it will dispel the notion that industry training is for students who cannot cope with academic study. If such a measure brings about greater parity of esteem for university and industry training, the bias in funding can eventually be eliminated in favour of an even-handed approach. The ideal situation is students making choices based on their aptitudes and interests and being given equal access to public funding to pursue those choices.

Recommendation:

9. Redirect universal fees-free funding to support workplace-based industry training. This policy initiative would include:
    - Fees-free training in polytechnics and private training establishments for all students in the New Zealand Apprenticeship programme.
    - Means testing degree-level fees-free study based on parental income.
    - Reinstating interest on student loans.

Employers

Employers' primary focus is on their business rather than supporting industry and trades training. Unless there is a sound business case for doing so, most businesses will not take on trainees. Even large and profitable businesses are likely to limit the numbers of trainees they

employ if training does not add value, or imposes net costs on, their operations.

Apprenticeship Boost (see Chapter 6) was implemented to provide wage subsidies to employers as an incentive to recruit and retain trainees during the COVID pandemic. It appears to have been successful; apprenticeship numbers increased by 36% between 2020 and 2022, the period during which the scheme paid the highest subsidies. It was wound back in 2023, and apprenticeship numbers fell accordingly. It will be further wound back in 2025 and is not currently funded beyond 2027.

The apparent success of Apprenticeship Boost suggests that wage affordability is a limiting factor on the willingness or ability of employers to take on trainees. The minimum training wage in New Zealand is 80% of the minimum general wage, which is itself high by international standards. In contrast, Germany's training wage starts at just a third of the minimum general wage.

New incentives for employers will be needed if the numbers of young New Zealanders undertaking workplace-based industry training is to be substantially increased. Implementing the recommendations of this report to enhance the status and quality of training-track pathways at school level will be of little value if not enough traineeships are available.

Understanding the high rate of apprenticeship uptake among German school leavers requires appreciation of the German employers' incentives. As noted in Chapter 2, culture plays an important role. In Germany, the trades are held in high esteem and German Trades Guilds date back to the Middle Ages. Many German tradespeople therefore feel a sense of tradition, which may explain their willingness to make sacrifices to train the next generation. That cultural tradition is not replicable in New Zealand.

On average, German school leavers are likely to be better prepared for trades and industry training than New Zealand school leavers, given the gearing of the German school system towards dual training. If the structural reforms to secondary education proposed in Recommendations 1–6 were successfully implemented, it would improve the average quality of participants in New Zealand Apprenticeships. They would begin post-school industry training better prepared and be more productive for employers more quickly. That would provide greater incentive for employers to take on trainees. However, it is uncertain how great this incentive would be on its own, and how much of an increase in the number of traineeships would result.

Compared with their New Zealand counterparts, German trainees are initially paid a much lower percentage of the general minimum wage. Decreasing New Zealand's minimum training wage would make the cost of training more affordable for employers. However, it would also reduce the incentives for people to enter workplace-based industry and trades training. While it would also be politically difficult to reduce training wages across the board in New Zealand, another feature of German dual training approach is that the training wage increases with each year of training. These increases reflect their increasing productivity as their training progresses.

A more plausible approach to training wages in New Zealand would be to take a similarly graduated approach, with first year trainees being paid less than the current minimum training wage, but with annual increases. Even if the average amount paid over the course of a traineeship was the same as it is now, it would reduce risk for employers. This would mean a closer match between a trainee's productivity and his or her wages at each stage of training. If a trainee did not complete a traineeship, the sunk costs for employers would be lower.

Further savings might be made if school students were able to commence traineeships while still enrolled at school. It would be appropriate for school students undertaking workplace-based learning to be paid, following Recommendation 6. However, they could appropriately be paid less than post-school trainees.

Another potential source of funding for wage subsidies would be an industry levy. In the German dual training programme, businesses pay a compulsory levy to Chambers of Commerce. However that levy is used to fund training centres rather than to subsidise trainees' wages. There is no reason, in principle, however, that such a levy could not be used for the latter purpose. Even so, the willingness of German companies to pay levies with little complaint again goes back to a sense of duty arising from cultural esteem for trades. The high quality of the German dual training system also leads to trainees becoming productive more rapidly. Furthermore, compared with New Zealand training organisations, German training centres provide much more support to employers in training apprentices. For all of these reasons, an industry levy is probably not a realistic option for New Zealand.

A more promising approach for New Zealand would be a bonding system. Businesses could elect to employ their graduating trainees on fixed term contracts – perhaps for three years. If a bonded graduate broke the contract before its completion, they would be indebted to the employer, with the debt underwritten by the Inland Revenue Department (IRD). The advantage to trainees of opting into a bonding system would be higher wages during their training. Bonded trainees would receive the basic wage plus a subsidy, while unbonded trainees would receive only the basic trainee wage. Under this system, a graduated basic wage could be introduced starting at a lower rate than at present, and the subsidy amount could be set to the present level, averaged over the duration of each traineeship.

Recommendations:

10. Introduce a graduated basic training wage, with annual increments, that starts at a lower rate than the present training wage and terminates at a higher rate.
11. Introduce a bonding system for trainees whereby they receive a wage subsidy, and their employers secure an option to employ them for three years immediately following graduation. Trainees who break bonds would incur a debt to their employers, underwritten by the IRD.

Workforce Development Councils

The current model for Workforce Development Councils (WDCs) is flawed. Membership is determined by ministerial appointment, making them undemocratic, unaccountable to the industries they are intended to represent, and politicised. Present funding arrangements for the WDCs will lapse after the 2024/25 financial year. This affords an opportunity to reconfigure them be more accountable and democratic, and to cover an expanded role. Rather than being ministerial appointments, WDC members should be elected by businesses in each sector.

Present roles of WDCs include standard setting, qualifications development, and advice on curricula for industry training. An additional role for should be advising on the development of secondary programmes of study that include work-integrated learning. That would afford an opportunity to flesh out the Vocational Pathways and establish fully accredited school-based qualifications for each programme (see Recommendation 7). It would give industry a stake in senior secondary education and an incentive to support a workplace-based component. This could become a valuable resource in the creation of a coherent secondary-tertiary industry-track pathway.

Recommendation:

12. Reconstitute Workforce Development Councils such that their members are elected by businesses in each industry sector.
13. Expand the role of Workforce Development Councils to include provision of advice on curriculum development for schools offering an industry and trades training-track.

Evaluation and monitoring

As noted in Chapter 4, government agencies ceased reviewing Youth Guarantee initiatives in 2018.Such lack of evaluation and monitoring reflects poor practice by policymaking agencies. It leaves them flying blind in the evolution of policy to account for changing social and economic conditions. Any implementation of the recommendations made in this report must be monitored and regularly evaluated. Evaluation requirements should include mandatory reporting of employment outcomes. Policy settings should be regularly reviewed and modified in response to this information.

Recommendation:

14. Establish an ongoing evaluation programme to monitor the effects of all or any of the above recommendations that are implemented. This review cycle should inform policy modifications.

Endnotes

1 Apprenticeship is the traditional term for an employment arrangement that develops novices into qualified industry professionals. It necessarily involves on-the-job training and, almost always, off-job, institution-based training as well. Typically, the term brings to mind trades such as building, plumbing and electrical work. In fact, the New Zealand Apprenticeships Register administered by the Tertiary Education Commission lists apprenticeships for 246 occupations, from sign-making to pastoral livestock farming to youth work. In this report, the terms apprenticeship, industry traineeship and trades traineeship are used interchangeably. To avoid the narrow interpretation that the term apprenticeship can invite, however, a change in official nomenclature from apprenticeship to traineeship should be considered.

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This report examines New Zealand's industry and trade training system and recommends strategies to enhance opportunities for young people.

It analyses the successful German dual-training model and contrasts it with existing New Zealand pathways, which position vocational education as a lower-status option than university.

The report argues for structural reforms that would elevate the status of trades education, provide clearer pathways from school to industry, and create sustainable financial incentives for employers to train the next generation of skilled workers.

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