



Lessons from Abroad: Transforming New Zealand's Vocational Education with German Practices

Building Bridges Delegation to Germany



Repräsentanz der
Deutschen Wirtschaft
German-New Zealand
Chamber of Commerce Inc.

Building Bridges Delegation to Germany

In February 2024, a delegation titled "Building Bridges" travelled from New Zealand to Germany to study the German vocational education system, with particular focus on the construction sector. The German vocational education system has been a recurring subject of discussion for the GNZCC, so organizing this delegation to showcase the system fulfilled a longstanding aspiration. The Chamber intends to glean insights from this endeavour relevant to enhancing vocational education practices in New Zealand. This report provides a summary of the delegation, which was undertaken by 11 delegates representing 13 diverse companies and organisations, spanning industry, iwi and education.

The visit was facilitated by the German-New Zealand Chamber of Commerce (GNZCC), in conjunction with our partners including the Handwerkskammer für München und Oberbayern, iMOVE at the Federal Institute for Vocational Education and Training (BIBB), and the Federal Ministry for Economics and Climate Action (BMWK).

The overarching aim of the project is to address a pressing need to establish a flexible and adaptive vocational education framework in New Zealand, aligned with the evolving demands of the construction and building industry. The delegation sought to glean insights, strategies, and methodologies from Germany's well-established system to inform and inspire innovative approaches back home.

This report summarises the collective experiences, observations, and perspectives of the delegation participants. It encapsulates their diverse insights and the invaluable exchanges that were facilitated. Further, it outlines a vision for next steps towards realising a robust and responsive vocational education ecosystem in New Zealand.

The following table provides a concise overview of key observations derived from various reports presented subsequently. It highlights a prevailing sentiment that New Zealand's Vocational Training Sector does not provide a consistent experience for trainees. This underscores a necessity to establish systems that outlive political cycles to ensure consistency, to the benefit of employers and apprentices alike. We acknowledge an alignment between the te ao Māori approach of planning for generations into the future and the German vocational education system. There is potential to integrate elements of Māori long-term planning ethos with vocational education practices, thereby enhancing the robustness and sustainability of New Zealand's education framework.

What we saw in Germany	What we have in New Zealand	What can we learn/take away for New Zealand
<p>1. Compulsory Membership and Supportive Infrastructure: Chambers of Crafts (& Commerce) play a crucial role in offering tailored support to businesses for three years.</p>	<p>Limited Support Infrastructure: NZ lacks a compulsory membership system and extensive supportive infrastructure for small businesses. It also lacks industry investment into training the future apprentices. New Zealand has more sole trader businesses and contractors than medium-sized companies.</p>	<p>Implement a compulsory membership system for relevant business chambers. This would enable offering tailored support to address early failures and scaling challenges. The foci should be on training the next generation and scaling businesses from sole trader to medium size.</p>
<p>2. Leadership Development through the Meister System: The Meister system fosters leadership development and skills transfer through apprenticeships.</p>	<p>Limited Focus on Leadership Development: New Zealand's vocational training lacks the structure of the Meister system. Limited pedagogical knowledge is needed to become a trainer. It is usually the last career station before retirement.</p>	<p>Introduce a structured leadership development system within vocational training, akin to the Meister system. This would include preparing technical experts to train the next generation of expert and business skills needed to own and run a business in construction and infrastructure. .</p>
<p>3. Industry Investment in Skill Development: Employers financially contribute to, and are actively engaged in, the entire training process, including final examinations, ensuring continuous investment in skills and up-to-date training for industry requirements. It is a world leading system.</p>	<p>Varied Employer Engagement: While some employers invest in training, there's no standardised approach, nor any mandate for industry investment in skill development. Again consistency is lacking.</p>	<p>Advocate for financial contribution from industry and greater industry participation in training and qualification development, fostering a culture of continuous investment in skills aligned with industry needs.</p>
<p>4. Consistent Skill Development: National programs are developed in collaboration with industries to ensure consistent capability development across sectors.</p>	<p>Fragmented Skill Development: Skill development initiatives in New Zealand lack national coordination and delivery, are often fragmented across sectors and small scale.</p>	<p>Ensure national programs, developed in collaboration with industries, can be delivered consistently to ensure coordinated skill development, bridging gaps between sectors and enhancing workforce capabilities. Establish accessible dual vocational pathways in all high schools to facilitate a seamless transition from education to employment</p>
<p>5. Effective Collaboration: Successful skill development initiatives involve clear roles and active participation from all stakeholders.</p>	<p>Limited Stakeholder Engagement: New Zealand lacks clear roles and active participation from many stakeholders in skill development initiatives.</p>	<p>Foster clear roles and active participation from all stakeholders, including industry, in qualification development and assessment processes. This would improve alignment with industry needs and enhance the effectiveness of skill development initiatives.</p>



Germany	New Zealand
World leading system	System in decline
Productive: \$109 GDP p/h/w	Not so productive: \$69 GDP p/h/w
Apprenticeship achievement rate: 85%	Apprenticeship achievement rate: 65%
Successful transitions: av age of 19	Career changers: av age of 27
Dual system	Flexible system
Industry ownership and tripartite Governance	Government ownership and governance
Social support despite low wages	Low mana option despite higher wages
Critical for economy and society	Critical for economy and society

Appendices:

1. Iwi Perspective & Pilot Programme
 - [Te Runanga o Toa Rangatira - Potential exchange Ideas with Germany](#)
2. System Change Perspective
 - [Transforming Vocational Education: Insights from the ConCOVE Tūhura Report](#)
 - [Reflections on the German dual vocational education system: provider perspective, opportunities](#)
 - [Germany and New Zealand key vocational education and workforce comparisons \(Skills Consulting Group\)](#)
3. Education Perspective
 - [An option for Dual Vocational Training in New Zealand](#)
4. Industry Perspective
 - [Advancing New Zealand's Trades: Addressing Historical Challenges, Enhancing Value, and Expanding Pathways](#)
5. Employer Perspective
 - [Elevating Vocational Education: Insights from the German Model and Key Features of a High-Performing System](#)
 - [Exploring German Apprenticeships: Expectations, Opportunities, and Benefits for NZ Companies](#)

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Te Runanga o Toa Rangatira - Exchange Ideas with Germany

Apprentice Exchange Opportunity

Te Rūnanga o Toa Rangatira is the mandated iwi authority for Ngāti Toa Rangatira which manages political and public interests on behalf of Ngāti Toa Rangatira including Tiriti claims and settlements, commercial and customary fisheries, health services (including primary mental health and residential care services), social services, central and local government relationships, and resource and environmental management.

We are also responsible for delivering education and employment outcomes for our community. Apprenticeships in the Construction and Infrastructure industry has made up a large portion of these outcomes over the past 3 years, in collaboration with Iwi and Community employers.

The invitation to be part of the NZGCC Delegation provided an opportunity to learn about work practices, apprenticeship and vocational training in Germany. It also facilitated valuable networking opportunities within Germany and the wider delegation group.

The Rūnanga consciously seeks opportunities for systemic change to support the growth, development and the wellbeing of our people. The delegation visit has enabled connections within the NZ contingent and the starting point for future collaborations and opportunities.

Whilst there is much work to do to provoke change at a systemic level, the Rūnanga have identified the opportunity to facilitate and support an apprentice exchange between Aotearoa and Germany.

The design of an exchange experience for an apprentice from Germany to Aotearoa will include

- 3 weeks long
- With an iwi business owner
- Roles available: Civil work, Carpenter, Concrete, Painting, Electrical, Mechanic
- Homestay among our iwi for 3 weeks.
- Cultural experience (Powhiri, Mihi Whakatau, Iwi Bus Tour, Marae visit)
- Pastoral care support from Te Rūnanga o Toa Rangatira.

Desired outcomes include but are not limited to

- Learn NZ Trade practices
- Experience formal Māori culture
- Experience New Zealand business culture.
- Experience informal Māori culture – Manaakitanga, whanau homestay.
- Personal and Professional growth

Identified Challenges

1. Language Barriers

Initially it would be more practical to facilitate an apprentice in Aotearoa as most German apprentices can speak English. This would prove to be a challenge for an apprentice exchange from Aotearoa to Germany, with the pool of NZ apprentices able to speak German being minimal or none. Intense networking and collaboration with German counterparts would be required to support a full exchange.

2. Funding

To fully support an exchange between ourselves and an employer in Germany, funding would need to be sourced. Potential Funding partners identified in NZ include employers, Te Rūnanga o Toa Rangatira, Te Puni Kōkiri. Connection and hui with NZGCC will support us to identify potential funding partners in Germany.

Extending Industry Opportunities

Other potential industry areas Te Rūnanga o Toa Rangatira can support Apprentice exchanges include Health, Technology and Film.

Next Steps

Te Rūnanga o Toa Rangatira Senior Leadership Team support for the apprentice exchange kaupapa.

- Planning, design and development of a programme
- Engage Iwi business interest and support
- Engage other required parties
- Network and connect with NZGCC and German counterparts

Transforming Vocational Education: Insights from the ConCOVE Tūhura Report

Katherine Hall, Executive Director at ConCOVE

Key projects to address learnings from GNZCC delegation to Germany

ConCOVE will run the following research projects to explore how lessons from the German dual vocational system could be embedded in the New Zealand context.

1. VET in Schools – a dual pathway for year 12 and 13 students – policy, practice, funding and other considerations.
2. Meister qualification – how might the New Zealand system adopt this approach.
3. Capstone – industry appetite and approach.
4. Industry investment – various funding models exist globally, what are they and what should New Zealand consider.
5. Investment in educating the educators – ConCOVE has three projects underway to explore this question.

Background

It is clear that the German model is both connected and consistent, where all parts of the system know and understand their place and role. Industry invests and expects positive outcomes and are engaged throughout the qualification development, funding and delivery process.

Systems change is immensely important to ConCOVE. In looking to redefine/reimagine the vocational education and training systems in Aotearoa New Zealand we recognise that any change made in one small aspect of the system will not provide the lift and shift we need to deliver outcomes for industry and thriving workforce participants.

We recognise that in Germany the following systems levers are working well, and we've contrasted the New Zealand experience alongside this to indicate where attention should be paid in our context. This also includes some of the action research that ConCOVE has underway already. Finally we have highlighted where work could be picked up by ConCOVE.

In **Policy** settings we see the following evident in the German dual-vocational system;

- Regulation determines industry investment.
- Training allowance for apprentices while studying support the apprentice with a fair wage that reflects their growing skills needs. Employers can pay more should they wish to.
- Government can efficiently steer the VET system and ensure quality.
- Strengthens the formalisation of the economy by regulating in-company training.
- Meets national labour market demand for qualified labour with contributions of employers (training).

In the New Zealand context we fail to unite those agencies involved in setting policy, with oftentimes, unintended consequences. For example, the competitive market for education across polytechnics drives programme delivery that does not meet labour market demand, and is at the expense of a long-term view of skills needs.

In **Practices** all parties are connected - the apprentice, the employer and the delivery organisation – and are focussed on outcomes;

- German legislation protects apprentices with a training allowance.
- Dual system and a consistent curriculum mean that on and off-job components complement each other, training off-job fills gaps that exist in employment, and closely connects industry to the training component of the learning journey.

Compare this to the NZ model where;

- Apprentices - most prevalent in carpentry though does occur elsewhere – are not hired by their employer. They are instead expected to become an independent contractor, while undertaking their apprenticeship.
- In NZ some business owners, particularly in the trades and civil sectors, will hold back completion of learning milestones for an apprentice due to milestones unlocking demands for a higher wage.
- Inability to complete due to not being exposed to various aspects of learning across the sector i.e. specialisations of employers mean lack of variety of work and corresponding skills development.

The **Resource Flow** settings in Germany are clear and understood, there is no grey area or funding uncertainty. Resources flow into and around in an expected manner and knowledge and education are valued.

Relationships and connections

At its foundation the German dual-system is built on strong relationships between government federal and regional and industry and education partners. Partly incentivised by legislation and industry investment, however it was clear in our interactions that the parties involved in producing outcomes for industry – employers and training delivery – were symbiotically connected.

In the New Zealand context the system relationships not connected. There are pockets of excellence, usually where there are passionate people with strong relationships and access to funding (often not from those agencies responsible for tertiary funding), however these teeter on the brink on a daily basis and the second a passionate connector leaves, the initiative will often fall over. Similarly when funding sources are changed or pulled initiatives will falter fail. Finally, these initiatives are often not scalable due to funding restraints and agency misconnection.

In Germany the **power dynamics** are clear.

- Given industry's investment into education they have a clear skin-in-the-game.
- Industry make up the Board of the Chambers of Crafts and Trades and Chambers of Commerce (where most civil infrastructure skills need sit).
- Industry are involved in all elements of the vocational education qualification design, delivery and assessment.
- Government reinforce need to meet industry needs through policy to support and protect apprentices.

Finally, if systems change is all about shifting the conditions that are holding the problem in place **mental models** are an absolute must-change in the New Zealand context. In Germany;

- It is clear that there is an underlying and long-held understanding of the importance of education. This is reflected in the connection across the dual system and investment into making the system work for all.

While in NZ;

- Contrast this to a NZ system where all the focus and funding is on the university pathway, often to the detriment of groups where this pathway does not support them/is a poor match for jobs at the other end
- The NZ system is too transitional creating a wide gap between education and employment, delivering outcomes that aren't necessarily meeting industry need e.g. pre-trade programmes, Trades Academy, though there is lots of potential in these models

Key focus areas for ConCOVE

Following the visit ConCOVE will explore projects relating to the following areas of opportunity.

Industry investment

Demonstrating benefit of industry investment driving a connected system that delivers consistent outcomes.

We are interested in exploring how this model in the New Zealand context. There has been work completed on this in the past, and it would be interesting to investigate this again. It would be naive to think we could go from zero to 2.6% (of salary and wage bills) investment in a heartbeat however a deep-dive into where this might unstick the VET sector in NZ could be worthwhile.

Investment in educating the educators

ConCOVE is already exploring what educating the educators might look like for our system through three key projects, affectionally known as the trilogy.

1. From skilled industry practitioner to Kaiako
2. Supporting technical experts to become work-based trainers
3. Investigating Training Advisors in work-based learning in the construction and infrastructure sectors

These will culminate in a report that brings together the learnings with recommendations for systems amendments to improve industry and learner outcomes.

Dual pathway in schools - how might we replicate this in Aotearoa New Zealand?

Similar to the work ConCOVE has undertaken in degree level apprenticeship and higher level apprenticeship we are interested in exploring barriers and system changes necessary to these in the NZ context.

We will fully explore how a proper dual pathway in NZ might be introduced. Potential option could be - Yr12 and Yr13 students employed and working in a vocational field three to four days a week, and in school for the remaining time. In this model the student would be paid a training wage **and** still be a student. The advantages would be many - list these.

Benefits

- To regions where connection to employment is limited due to population size and employment opportunities the model could explore a FIFO type approach where students/apprentices
- Level 3 qualifications could be accessed in Year 12.
- Level 4 qualifications could be commenced in Year 13.
- Students/apprentices retain the benefit of the social aspects of school life important to developing their full selves e.g. participation in sport, milestone events like a school ball, leavers dinner, awards ceremonies.
- Schools retain students and numbers important for funding.

For our context it would be construction and infrastructure however done well this would be a replicable model. Worthy of note here are two things.

1. Civil infrastructure training school delivered by Fulton Hogan and CCNZ, supported by MSD and the Construction Sector Accord in 2018/2019 demonstrated the importance of recruitment of apprentices into an organisation prior to commencing their training. Participants reported a sense of belonging and connection to an organisation before they spent time in training and retention beyond that time was higher.
2. Emerging research commissioned by the Food and Fibre CoVE and delivered by Arthur Graves Consulting and the Skills Consulting Group revealed a positive impact on retention in industry up to three years following participation in a Trades Academy.

The model however needs structure and consistency. Clearly aspects of New Zealand's current system would not align well to this dedicated dual pathway e.g. single funding models in education. It will also be important to investigate all elements of the six conditions of systems change and reflect these in this work.

Capstone assessment

We will work on a project to determine how capstone assessments might be modelled in the NZ context. The Education and Training Act 2020 allows for the use of capstone assessments however development of these haven't yet been a focus of industry training organisations (in the former model) or Workforce Development Councils (in the current model).

It is possible that competitions like WorldSkills, Master Electrician's Tradesperson of the Year and Civil Contractors Excavator Operator Competition might contribute to a capstone, though we recognise that there may also be drawbacks of a competition-based assessment. Indeed there may also be limitations of a capstone for minority groups, neurodivergent individuals and the disabled. However there may also be equal benefits and overall this is worthy of exploration.

Meister qualification

The opportunity the Meister qualification affords us is huge we believe. In Germany around one-third to 50% of completed apprentices go on to take the Meister qualification. In recognising the challenge New Zealand has to scale business and to invest in leaders ConCOVE recently introduced a fourth priority group to its project Strategic Alignment Test – that of Leaders and Learners as Managers. It is possible that a Meister level programme - level 5 and 6 on the NZQF might support the business capability and leadership gaps prevalent in the sector.

In Germany this qualification is also necessary for future business ownership and importantly it focusses on crafting the future apprentice, with participants required to undertake learning to support training and education of others.

A Meister level programme could also pathway into a Degree Level Apprenticeship-creating a seamless pathway from school to higher level education, more rounded individuals, a more productive economy and workforce needs of the wider construction and infrastructure sectors being met.

In creating new opportunities for delivery organisations in NZ we see the Meister programme as a potential positive investment for government and industry into driving a sustainable and diverse workforce, delivering equitable outcomes, in NZs construction and infrastructure sectors.

About ConCOVE Tūhura:

ConCOVE is New Zealand's Centre of Vocational Excellence for the construction and infrastructure sectors. As an applied research agency, ConCOVE initiates and funds projects aimed at addressing skills shortages, improving training, and enabling career pathways. ConCOVE is funded by the Tertiary Education Commission.



Reflections on the German dual vocational education system: provider perspective, opportunities

Brian Dillon, Pounuku Ako ā-Motu: Hanganga me ngā Angaanga | National Ako Network Director: Construction and Infrastructure

Introduction: A construction delegation to Germany 19 – 24 Feb led by GermanNZ Chamber of Commerce, and to better understands the German Dual VET system. While the context was primarily construction, the system supports trades and industries across the spectrum.

Macro/over-arching observations:

- Education is highly valued – longer term view, ingrained in practice, culture
- Legislative mandates help: training levies, professions defined in law
- Parts/players in the system seem connected: EU - Federal – State, and company – Handwerkskammer (Chambers of Skills and Crafts) – training schools
- Training companies/industry book-end the process: on the boards of Handwerkskammer, are active participants in the training (including contributing to curriculum development), and are members of exam panels
- Varied, clear and flexible pathways: from secondary school, into work and study, and across VocEd and university, and beyond
- A lot of EU-led, funded activity; some initiatives/pūtea can be accessed by non-EU states
- Big focus in Europe on a) digitisation, & b) greening (environmental)

Provider-specific reflections

- Many of the points above enable/support quality training in the training schools, from systems, federal/state govt support, and regional/local practice. *Promote opportunity to strengthen our system – more connected/integrated; companies more invested/engaged*
- Teacher:learner ratios seem smaller than in NZ, circa 1:12. Also seems kaiako | teachers are under less pressure there – they do the teaching/training, whilst (external) exam panels are convened to do the final exams. Big focus on teaching and learning, including formative assessment/practice. *Promote kōrero across networks re formative (for learning) assessment, vs summative; industry input into qualitative standards*
- Meister | Master (craftsman) training is a requirement in what we know as advanced trade qualifications. Lots of support for this from the delegation – *opportunity to actively socialise, promote this with industry, WDC, providers.*
- Industry fund supports learners (& therefore employers/companies) while at training school. Hours at work and at school are prescribed *test appetite to discuss/consider this; promote opportunities that a levy could enable*
- Practices/tasks in the training schools are very similar to those the NZ system, right down to individual learner tasks – cutting and framing a scale roof, using project plans to re-create scaled versions of i.e., paving, brick/masonry projects.

Industry

- All companies are Handwerkskammer members – 1st 2- or 3-years' membership are free; services available to support their business development, growth
- Work very closely (via Chamber) with training schools to support training
- Innung (Guilds) are the local/regional industry associations ala NZCB, RMBA; they can in some cases deliver curricula

To promote discussion on:

Mental models/mindsets:

- Shift the language we use from where the training happens (campus-based, work-based, online), and the funding that supports that, to referring to the 'players' – companies, trainees, schools

Systems change:

- Integrate Vocational Pathways into WDC – look at it from an industry perspective rather than a 'who does the training/where does the training occur' one
- WDC could develop NZ Programmes, include prescribing hours (on job, off job)
- CoVEs sitting in Shared Services function; Fee for Service, research.
- WDC as our version of Handwerkskammer? Establish standards (& define professions?) with industry, develop curriculum, coordinate/convene exams

Provider leadership, practice:

- Work with industry associations to promote, deliver on apprentice, employer and kaiako exchanges to Germany *This is an immediate opportunity*
- Explore opportunities for separation of (summative) assessment (think external exam) - Research project?
- Partner with EU member-state, access tools, pūtea - [ISATCoVE](#) tools, [European Training Foundation](#) (ETF) insights – help inform sector, individual organisation self-reflection, analysis
- Consider developing MoU's with partner orgs in Germany – would need to be done at business division level (for now)



Side-by-side:

Germany and New Zealand key vocational education and workforce comparisons

	Germany	New Zealand
Population	84.6M	5.1M
Working age population	53.5M	4.2M
GDP per capita	\$52K USD	\$48K USD
PISA 2018 Maths	500 (20 th)	494 (28 th)
PISA 2018 Science	503 (16 th)	508 (13 th)
PISA 2018 Reading	498 (21 st)	506 (11 th)
School leavers entering apprenticeships	50%	9%
Apprentices	1.22M 2.2% of workforce	85,500 2% of workforce
Apprentice Gender	65.4% male	82% male
Apprentice Completions 2022	468,900 (0.8% workforce)	13,155 (0.03% of workforce)
Apprentice Completion rate	75%	47%
Final Apprenticeship Examinations	Professional Guild	Vocational Providers



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An option for Dual Vocational Training in New Zealand

Dr Michael Johnston, Senior Fellow, The New Zealand Initiative

The German Dual Vocational Training (DVT) system rests on a partnership between industries and vocational schools. Students are employed as apprentices in companies while simultaneously undertaking a qualification with a school.

A company can train apprentices if it is approved to do so by a chamber of commerce. To qualify, a company must demonstrate an ability to provide appropriate training. This includes having qualified trainers on their staff. Companies pay compulsory levies to chambers to fund vocational schools, with Government also making a contribution. Apprentices do not pay fees to study.

About half of all German school leavers enter DVT. Typically, apprentices spend one or two days per week attending vocational schools and the balance of the time working on the company's premises. Training programmes usually run for three years, with the time spent working in companies increasing in each of the second and third years.

Companies undertake to contribute to training apprentices in their employment contracts. Often, the companies offer more specialist training, based on their specific products and services, while vocational schools ensure that apprentices acquire all of the fundamental skills of their vocations. Upon successful completion of a final examination, apprentices graduate with journeyman qualifications. They may then enrol in university study if they wish.

Barriers to replicating German DVT in New Zealand

The German DVT system is recognised internationally as being of very high quality. The combination of school-based and on-the-job training provides a highly skilled workforce. However, political and cultural differences between the two countries pose substantial obstacles to replicating the German model in New Zealand.

One aspect of the German education system that arguably supports DVT is the division of secondary education into different tracks. At the age of 10, German students opt to attend either Gymnasium schools, which prepare them for University, Hauptschule, which prepare them for trades education, or Realschule, which provide a more balanced pathway¹. Hauptschulen, in particular, provide a clear support for, and pathway into, DVT, although many students graduating from Realschulen and Gymnasium schools also undertake apprenticeships.

New Zealand has had a unitary, comprehensive system of secondary education for many decades and there would be no political or cultural appetite to change that. While the German secondary system affords some flexibility for students to move from one type of school to another, implementing the German approach to secondary schooling in New Zealand is not, therefore, a realistic option. That does not, however, pose a prohibitive barrier to establishing a DVT system in New Zealand. Even so, the lack of a clear secondary school pathway into apprenticeships at a systems level – such as that provided by the Hauptschulen, is one likely reason that only a small proportion of New Zealand students undertake apprenticeships upon leaving school.

¹ The precise configuration of secondary education varies somewhat across Lander.

A more serious barrier is posed by differences in the culture of German and New Zealand industry. Replicating German DVT would require significant financial investment by companies, in three ways. First, they would have to contribute to the funding of training providers, which at present they do not. Second, they would have to gear themselves to provide high-quality training. Third, they would have to enable their apprentices to attend training providers for significant periods of time, while continuing to pay them. Furthermore, German salaries for apprentices are well below the minimum New Zealand wage, and would therefore be illegal in New Zealand. A different approach is therefore required.

A DVT model for New Zealand

New Zealand's NCEA system of qualifications for the senior secondary school (comprising NCEA Levels 1, 2 and 3) offers a potential alternative to German Hauptschulen as a pathway into apprenticeships. NCEA can be gained by accumulating sufficient credits from standards registered on the New Zealand Qualifications Framework at the level of the certificate or higher. This includes credits from standards in both academic and vocational subjects. It is therefore straightforward to configure an NCEA programme with an emphasis on vocational training. Many schools run programmes like this.

A second element to creating a viable and attractive pathway into apprenticeships, is partnership between secondary schools and companies. This might involve internships for one or two days per week, while completing NCEA qualifications using industry relevant standards, with an agreement that students who successfully complete those qualifications will be offered employment in those companies, and flexibility to study at training providers simultaneously.

This version of DVT would have two disadvantages relative to the German model, which would need to be addressed.

It is unlikely to be politically feasible to implement the compulsory membership of chambers and the associated levies that help fund the German DVT system in New Zealand. Apprentices would therefore have to pay tuition fees, often by incurring student loans. This would be offset to a degree by the considerably higher wages required by law in New Zealand, compared with German apprentices' wages. Even so, those higher wages might themselves be a disincentive for companies to participate in schemes like this.

The most serious disadvantage is that New Zealand companies are not typically geared for high-quality training. Addressing this may require incentives, potentially paid by the Tertiary Education Commission, to establish that capacity in return for agreeing to provide quality-assured training.

Some programmes of this nature have already been established in New Zealand. One such programme is P-Tech². P-Tech is a worldwide educational programmes, established to address the skills shortage in technological industries. It involves a partnership between secondary schools, tertiary training providers and industry. It is therefore a form of DVT. Several schools in New Zealand are currently involved in P-Tech. There are other such programmes, but there is no systematic approach to establishing them. A forthcoming report from The New Zealand Initiative will explore the role of public policy in promoting similar pathways from NCEA into DVT.

² <https://tpplus.co.nz/community/p-tech-preparing-maori-and-pacific-students-for-futures-in-stem-industries/>



Advancing New Zealand's Trades: Addressing Historical Challenges, Enhancing Value, and Expanding Pathways

Jon Davies, Technical Sales Support and Education Manager, Pro Clima & Kieren Mallon, Managing Director, Meridian Construction

History. The positive and successful history of training and trade apprenticeships in New Zealand needs to be re-kindled. One of the biggest issues underpinning the state of the trades at present is the undervaluing of the skills, the craft, the industry, and therefore the calibre of people attracted in. Turning this around will take time, effort, funding and, critically, engagement of industry and education providers together. The example of Germany's system can be used to guide us, there is little need to invent something new.

Issue - Value. Increasing the value of the tradesperson's skills to create, make, repair, and maintain objects will need to occur in order to increase the value of the trades in general. It's a matter of trust. Higher levels of skills will manifest in higher quality craftsmanship, higher wages, better recognition of the skills (higher valued skills).

This trust model was highlighted by a comment ZWH Head of Sustainability and Internationalisation Juliane Kreise made during our tour. In the context of engaging a German trained, qualified contractor to work on her house she said "I know exactly what I'm going to get".

That is trust.

Unfortunately, in New Zealand non-expert individuals have to check references rather than rely on qualifications and skills. We have to ask neighbours if they know of 'a good plumber' - in essence, someone else needs to vouch for them, because the qualification (or lack of) doesn't mean enough.

The German view: Practical and Theoretical testing at the end of the apprenticeship by independent party. Align exams and sign-off to bi-annual window.

Issue - Consistency. Following on from Value. For value to be realised we need to have consistency of outcome and ensure that all trainees come out of their apprenticeship with a minimum benchmark skill level both theoretical and practical. Currently the process allows for sign-off to occur by the TA and/or the employer. There is a wide variance of what is acceptable. There could be more emphasis based on a capstone assessment at the end of the apprenticeship similar to the German model where there is a biannual graduation of apprentices following a written and practical assessment. This would also give an opportunity to promote this event to instil pride in the achievement, and achieving the outcome of value raised in the first point.

Quality employers. Currently there is no requirement for trainers to be qualified. The German model has a train the trainer module as part of the Meister program. If this was implemented into our regime it would be another step into consistent outcomes. This would become part of a mid to long term initiative to achieve consistency.

Issue – Return on investment. A large uptake in trainee numbers following Govt intervention with subsidies provided a catalyst for increased training, however it also encouraged an increase in some employers taking on trainees for the money. Which possibly could have some negative outcomes, especially as the market tightens and these employers make their trainees redundant. We need to encourage Employers that taking on a trainee is the right thing to do and not just a source of cheap labour.

Employers also see that if the trainee is not producing then they are a cost to the business. This thinking hampers the opportunity for trainees to go offsite to learn as employers see it as a cost rather than an opportunity. With only a small percentage of employers training it relies on those that see it as their responsibility and see the value. The opportunity is to look at how whole of industry could take ownership of training and partially fund. In Germany we see this happen through a levy. In NZ we already have a levy applied to consents. A portion goes to fund BRANZ and the rest goes to MBIE where the understanding is this money is underspent. It is also able to be allocated to education. How can we leverage this?

Clarity Issue - Pathways in

As a school leaver, it's impossible to know all the options for a vocation, a career. To attract young people into the trades the trades themselves must be visible. A consistent, long-term advertising strategy needs to be employed to increase visibility and provide pathways in.

NZ average age of trainee: 27

Germany average age 19

The German view: catch school leavers using clear pathway.

Clarity Issue - Pathways through

During study things change, interests change, opportunities present themselves and these need to be allowed for, encouraged, and promoted as forming part of the pathway through the trades. This will avoid the 'I'm a builder and I'll only be a builder.' In reality the options are endless to move into other fields. We need to make this visible through video interviews or similar of people who have taken a pathway through building into other aspects of the industry eg. Product design, materials analysis.

The return on investment for employer is a challenge to overcome – offsite training means consistency of education but also paying for someone not earning onsite. There is also the issue of poaching employees, and worse, trainee is simply a cheap labour unit.

German view: this is an area of challenge also, however when Whole of Industry funds trainees through education fund contribution, the imbalance of cost to train is removed.

Opportunity – pathways beyond

The step at completion of an apprenticeship and moving directly into further study seems to be unavailable. The German system creates clear steps into higher education – university (engineering, architecture), Meister training. There was a clear message that this pathway of hand-skills first then adding theory later was of higher value than a purely theoretical university education. What we saw was also fluid enough to operate in reverse – students of architecture were in technical schools studying at least portions of the handcraft skills.

Incentivised study could improve the attractiveness of a vocation, the skills in vocation, and retention of people within varied areas of the trades.

Solution: connect education to business

Business owners question the product of trade training – the skills don't fully match what is required on the job site. This is an opportunity to have closer contact and feedback between industry and those setting the training curriculum and the achievement standards. The Chamber of Trade and Crafts for Munich and Upper Bavaria welcomed us into discussions with several of their members (business owners) including Heinz Tretter who was a Board Director of the chamber also. This link between standard-setting for training and the industry/craft was direct at governance level, not just advisory level.

New Zealand also needs Quality Employers who are able to train. This covers three areas; one is the challenge of specialisation where a business cannot provide the full spectrum of opportunities an apprentice requires to be signed off. Overcoming this could be achieved with micro-credential/ short courses off-site. Secondly, there is no formal education required for trainers of apprentices. This creates variable and often sub-optimal outcomes. German view: Train the Trainer programmes. In Germany the trainer must hold the Meister qualification before being allowed to train an apprentice.

Thirdly there is no requirement of business skills training prior to starting a business in NZ. German view: Meister qualification required which has included training in business. Every business within the trades must belong to a chamber/trade association which is in turn connected back into the training and upholding of skills.

Opportunity to Action

1. Fund training through a new mechanism: % of gross salaries for all workers. All industry benefits, therefore all industry can contribute to training. Incentivise employers to train
2. Use offered opportunities for knowledge transfer
3. Send students in final year of study for experience and possible work opportunities
4. Bring 3rd year apprentices in as teaching assistants
5. Develop a series of clear pathways In, Through and Beyond the trades to a. Attract, b. Value, c. Retain, d. Educate e. Build skilled industry



Elevating Vocational Education: Insights from the German Model and Key Features of a High-Performing System

Rachel Simpson, Manager – Education, Skills and Immigration

The features of a high performing vocational education and training system have been well articulated – a **broad education** that enables learners to apply cognitive and noncognitive skills in an authentic industry setting and that prepares them to further develop their skills over their working lives. The **standards and credentials** should be widely recognised and valued by industry and exemplify the leading edge of global industries contextualised to local conditions. **Knowledgeable and experienced instructors** provide learning and practice opportunities on relevant equipment. **Investment is aligned to economic need** and there are appropriate incentives to enhance the attractiveness of being a training firm, or pursuing vocational training.

A close review of the German vocational system also highlighted:

- The strong role of industry associations and Chambers of Commerce to drive the system, including membership of Apprentice employers that ensure companies have access to a broad range of business advice and expertise, including current industry and regulatory advice, employment relations advice and support, networks to share best practice and data collection to generate insights on the skill supply to labour market demand. The key measure of success in the system is whether business and industry is satisfied with the skills being produced (note, New Zealand has no published, systematic employer feedback loop on the skill system). Anchoring training services within competent business associations also normalises Apprenticeships as 'part of doing business' and there is a high level of participation of firms of all sizes.
- Specialised 'craft skills' and major industry with higher levels of automation are differentiated to ensure Apprenticeships still deliver a broad base education, however recognises the different work organisation, capabilities and resources to deliver to allow a more tailored service offering to training support needs. Employment is the key criteria for all Apprenticeships.
- The standard of education was higher, partly due to higher compulsory education standards, but also reflective of the high industry standard of skill expected. The education sector responds to industry specifications to design the programmes, and Apprentices spend far more time at off-job training, with a graduated reducing time as the apprenticeship progresses, developing practical and theory skills. The course-based training is valued by employers as responsive to business need and delivered to a high standard.
- Apprenticeships have high esteem despite low wages. Averaging at 60% of the minimum wage, the time off-job is accounted for in remuneration rates and vocational careers are a valued and viable option for school leavers and families.
- A structured approach to Apprenticeships supports a high level of co-operation, alignment of expectations and clear understanding of roles and responsibilities.
- Higher level mobility in the system is supported with recognising a Master skilled person that form the instructor workforce, and provides academic pathways and career progression to master craftsman.



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Exploring German Apprenticeships: Expectations, Opportunities, and Benefits for NZ Companies

Andrew Cosgrove, Canstaff

The German education system for apprenticeships and exchange programs.

During the GNZCC trip to Germany, the delegation was given a comprehensive overview of the career pathways available to students towards attending either higher education or pursuing an apprenticeship or visiting training courses for other occupations. As part of this schooling for carpentry and joinery, apprentices are very keen in a working exchange abroad to the South Pacific region. This is an attractive option often taken by many young tradesmen after they are freshly qualified after their apprenticeships.

Many of the German apprenticeship institutions encourage this exchange program with New Zealand as it offers the apprentice the opportunity to experience another culture and deepen their knowledge within the building or joinery industry. The travelling apprentice sees other ways of building and or using their knowledge and hand skills towards an end project that they may not see in Germany. Either during or after the completion of the apprenticeship depending on whether there is enough time and funds available.

The NZ Company perspective towards Apprenticeships training and exchange programs.

Medium to large sized companies play a strong role in NZ towards providing apprenticeships and participating in exchange programs. Most companies see the placement of apprentices not only for the short-term benefits but also for the greater benefit of the building or joinery sector. Often the companies see this as a way of giving back to society and the greater community and not just for the industry.

Due to the increase of market driven specialised skill sets, such as CNC operators, and inevitable higher levels of atomisation seen within the marketplace, an apprentice with traditionally broad hand skills and knowledge is very desirable and becoming harder to find. To remain competitive most companies are having to specialise and therefore apprentices, to learn a broad ban of hand skills, are having to visit other factories or learn more off-site at work organisations. The capabilities of a building or joinery company to deliver an all- encompassing apprenticeship are rapidly declining. With many companies becoming specialised the input from overseas tradesmen or apprentices at a high level are very welcomed in NZ. Not only welcomed but needed. The latest figures and market consensus would indicate a fall in both academic and hand skill levels within the NZ tradesmen leaving our training institutions.

Companies that act within the best interests of the industry and their apprentices, have a very structured approach to their training programs. They show a high level of co-operation, alignment of expectations and a clear understanding of roles and responsibilities. A realization that to have a well-rounded, competent, and



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socially responsible employee, a skilled craftsman and tradesman needs a proactive company that provides an instructor or mentor that shows not only hand skills and imparts knowledge for the trade but also shows the academic pathway and career progression for the road ahead. Without this support many tradesmen are ill equipped and leave the trades without seeing what opportunities lie ahead. Currently finding companies that are willing to take these apprentices both now and, in the future, could be a challenge due to the financial commitment and down-time.

NZ Companies sending their apprentices to Germany.

New Zealand companies see a clear benefit from sending their apprentices to Germany. Germany is clearly renowned for quality products, precision and having effective professional training for tradesmen and their machinery. Offering a “Kiwi Tradesman or Apprentice” this opportunity of learning from abroad is attractive for staff retention and for the betterment of the company’s long-term quality of employees. The immediate questions to address are the language barriers, as not all apprentices or tradesmen speak fluent technical German, however with Germany being a major global player, most instructors speak English. These days with the availability of on-line “Blended Learning solutions” English programs and learning material is available.

The issues of down-time and costs is also the other consideration. This must be seen as a long-term calculation. With a certain future ROI locked in, a contract with the apprentice or young tradesmen guaranteeing a certain period at the company before a resignation is possible would be an easy solution. If the returning member of staff has learnt more progressive or efficient methods of manufacturing or better practices which saves money, then the downtime from their absence is also quickly recuperated.

The German apprentices’ view on exchange to NZ

For many students, that decide to take on an apprenticeship, an overseas trip to another country such as New Zealand is not only a life changing experience, but also an attractive incentive that otherwise may not have been possible. Being European the average apprentice has grand expectations of what they wish and must fulfil within their overseas stay. The apprentices have detailed woodworking skills that they should experiences and complete in alignment with the academic skill sets accomplished.

The young people want to work with other tradesmen seeing how they work with varied materials on the building sites. The opportunity of discussing issues found and practical solutions allow a tremendous opportunity for the sharing of knowledge and building techniques to be compared between the two countries. This “Transfer of knowledge” is a key reason for the enthusiasm shown by NZ companies and German apprentices taking part in these vocational and exchange programs.

German apprentices are not as relaxed as the typical New Zealander and expect a detailed list covering an accommodation address, a detailed description of employer and what work will be expected to do, the local area and what there is to do and see, a contact person should issues arrive or a pastoral care solution for any unforeseen complications. As NZ is so far away, a good support system is paramount for both the apprentice and the institution that sent them.

We have such a beautiful country therefore the apprentices often enjoy the opportunity to combine their work with sightseeing and travelling whenever possible. An apprentice will usually finish their work contract with an extended period touring NZ and appreciating the “Land of the long white cloud.” In conclusion, Companies see the varied benefits of working with German apprentices and will support this initiative moving forwards. German apprentices love NZ and we only have to find the companies to take part in this program.

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Impressions of the Delegation Tour

