

Funding of workplace training and work-integrated learning for the construction and infrastructure industries

Background

The construction and infrastructure industry is a critical part of the New Zealand economy accounting for 15 per cent of the total workforce and generating \$52.7b in GDP. The industry employed around 373,907 people in 2023ⁱ, with women making up 18 per cent, 17 per cent who whakapapa Māori and six per cent who identify with one or more Pacific ethnicityⁱⁱ.

The tertiary education and training system produces around 9,800 graduates each year at all levels with construction and infrastructure related qualificationsⁱⁱⁱ, and many other learners who obtain skills and competencies either as part of tertiary education that they do not complete or qualifications in other fields or through training organised by employers.

Yet the industry has a long-standing shortage of skilled workers (some estimates put the undersupply of skilled construction workers at up to 375,000 people^{iv}), the industry experiences high levels of staff turnover and has a long-standing issue with relatively slow productivity growth^v due to skills shortages, training mismatches and regulatory barriers^{vi, vii}.

Many employers point to a mismatch between the skills that tertiary education provides and those they require, just fourteen per cent of construction and infrastructure employers are actively engaged in tertiary education and training^{viii} and achievement rates in tertiary education vary considerably.

Investing in the workforce

Employers, government and learners invest heavily in tertiary education and training and workforce development.

Direct government subsidies for tertiary teaching and learning in the construction and infrastructure industries total around \$352m per annum^{ix} supporting around 80,000 learners, with around seventy per cent undertaking apprenticeship programmes^x. The government also provided support through student loans and allowances for eligible learners, as well as targeted support such as the Apprenticeship Boost scheme and Skills for Industry programmes.

Employers support workforce development through their own investment in staff training including developing new staff and supporting government-funded teaching and learning by paying tuition fees for learners, making workplaces available for work-based training and releasing staff for on-job and off-job training.

Learners make direct contributions like the tuition fees and course costs they pay or student loan repayments and indirect contributions, such as the time they spend on their studies.

For the system to work effectively, we need a funding model that incentivises better performance and maximises benefits for individuals, employers, and the wider community.

What we want to know

The main questions we want to answer are how the funding and incentive structures for vocational education and workforce development in the Construction and Infrastructure sector can be optimised to:

- Create a more responsive system that promotes and maintains alignment between education outcomes and workforce needs
- Strengthen industry-education-government partnerships and co-investment in skills development
- Promote equitable access and outcomes from vocational education.

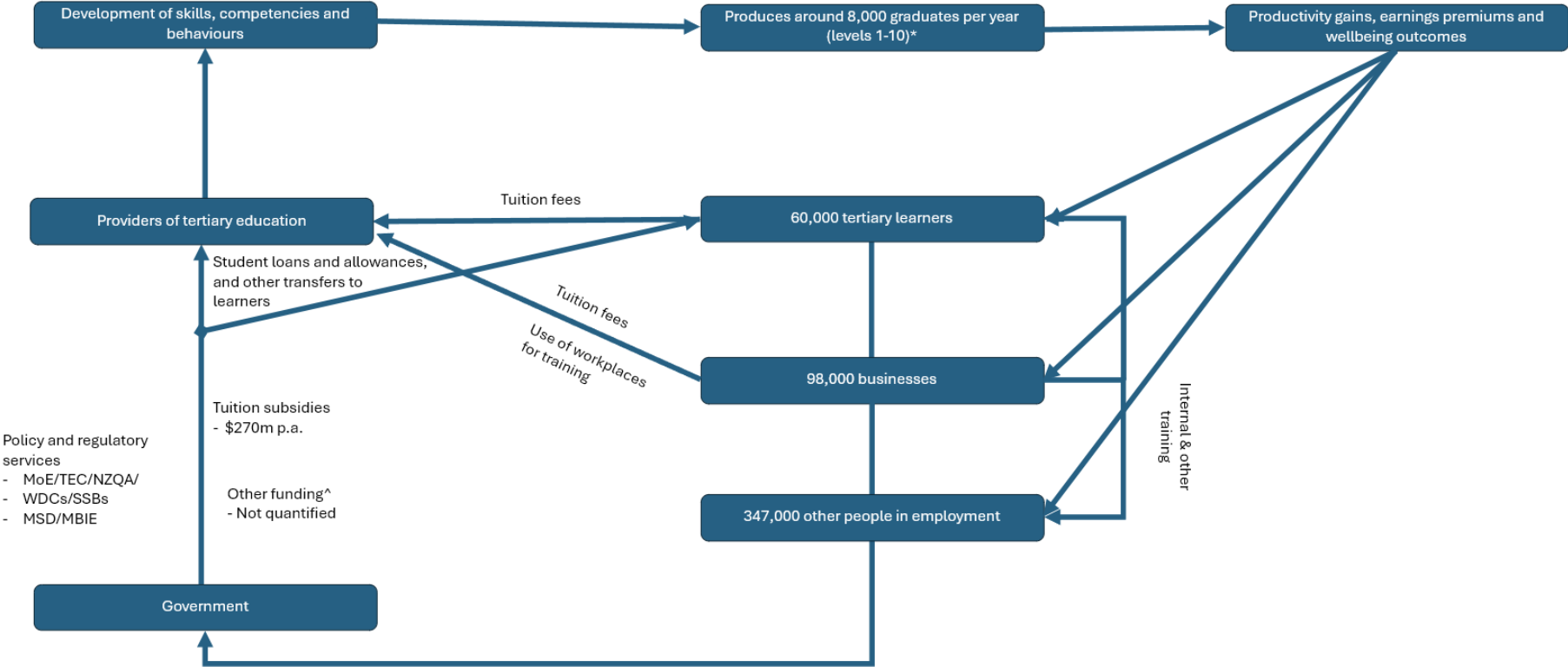
We are looking for integrated and holistic solutions that support collective action.

Why are we asking these questions?

We think there is a case that the current tertiary education funding model, especially for the construction and infrastructure industry:

- Undervalues the returns for society and industry arising from investment in vocational education – by the government, by employers and by individual learners; education and training in areas such as the construction and infrastructure industries leads to a skilled workforce that pays a large economic and social dividend^{xi}
- Treats work-integrated learning as an add-on rather than an integral aspect of vocational education^{xii}
- Treats training that occurs on the job following completion of a vocational qualification as separate from formal education – essentially, the government sees the training system through a funder's eyes and hence, it is blind to the on-job post-qualification training and mentoring that is an essential part of the “finishing” training of new employees^{xiii}
- Sustains and reinforces hierarchies of esteem in post-secondary education^{xiv}.
- Uses different models to fund vocational education and degree-level education even though vocational skills are acquired during degree education^{xv}.
- Places barriers to innovative solutions^{xvi} including those designed to address inequities in the system enabling thereby enabling the systemic racism, sexism, ableism, etc to continue^{xvii, xviii, xix}.

Resourcing flows – construction and infrastructure tertiary education and training



Notes
 ^ Includes other initiatives like 'Fees-free', Apprenticeship Boost, Skills for Industry and Mana in Mahi
 * Post-study outcomes data for Architecture and Building and Civil and Geomatic engineering, average of graduate cohort for 2018-2021

END NOTES

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- ⁱ Waihanga Ara Rau WDC. 2024. Submission by Submission by Waihanga Ara Rau, Workforce Development Council for construction and infrastructure Redesign of the vocational education and training system September 2024. Waihanga Ara Rau Workforce Development Council. URL: <https://www.waihangaararau.nz/publications/>
- ⁱⁱ Waihanga Ara Rau WDC. 2024. Briefing to the Incoming Minister December 2023. Waihanga Ara Rau Workforce Development Council. URL: <https://www.waihangaararau.nz/publications/>
- ⁱⁱⁱ TEC. 2024. Data on post-study outcomes for tertiary education graduates – Post-study outcomes national data. New Zealand Government. Count based on the annual average of the graduate cohort for 2018-2021 for architecture and building and engineering and related technologies (civil and electrical/electronic engineering and technology only). URL: <https://www.tec.govt.nz/funding/funding-and-performance/performance/data-on-post-study-outcomes-for-tertiary-education-graduates>
- ^{iv} Waihanga Ara Rau Workforce Development Council. 2024. Call for Māori workforce to get upskilled to address the construction and building skills crisis. URL: <https://www.waihangaararau.nz/call-for-maori-workforce-to-get-upskilled-to-address-the-construction-and-building-skills-crisis/>
- ^v New Zealand Infrastructure Commission Te Waihanga. Rautaki Hangahanga o Aotearoa New Zealand Infrastructure Strategy 2022-2052. New Zealand Government. URL: <https://tewaihanga.govt.nz/the-strategy/7-a-world-class-infrastructure-system-how-we-get-there/7-5-building-workforce-capacity-and-capabilities>
- ^{vi} MBIE. 2023. Building and Construction Sector Trends – Annual Report 2023. New Zealand Government: URL: <https://www.mbie.govt.nz/building-and-energy/building/building-system-insights-programme/sector-trends-reporting/building-and-construction-sector-trends-annual-report/2023>
- ^{vii} New Zealand Institute of Building. (2021, November). Improving New Zealand Construction Industry Productivity: An Overview. Retrieved from <https://nziob.org.nz/assets/CPG-Abridged-version-Final-30-Nov.pdf>
- ^{viii} Data for the 2022 year provided by Waihanga Ara Rau Workforce Development Council.
- ^{ix} TEC. 2024. Nga Kete. Tertiary Provision App. New Zealand Government. Tertiary education funding for architecture and building and engineering and related technologies (civil and electrical/electronic engineering and technology only) in the 2023 calendar year. All levels. All tertiary education organisations.
- ^x MoE. 2024. Apprenticeship boost initiative: Monthly demographic statistics. New Zealand Government. URL: <https://www.educationcounts.govt.nz/statistics/apprenticeship-boost-initiative-monthly-demographic-statistics>
- ^{xi} Research suggests that the financial returns to learners and presumably the broader economy may be comparable. See Cox, M. 2021. Does New Zealand need so many young people studying for a degree? And would young people be better off doing something else?. BERL. Finnie R and Miyairi M 2017 *The earnings outcomes of post-secondary co-op graduates: Evidence from tax-linked administrative data* Education Policy Research Initiative, University of Ottawa traces the longer term impacts of participation in work-integrated learning, finding that those who complete a degree with a work-integrated learning component fare better in the labour market.
- ^{xii} For example, universities in New Zealand have made some progress in offering a wider range of work-integrated or work-based learning opportunities. However, these options are often not credit bearing or are poorly integrated into the workplace with limited scope to make use of naturally occurring evidence. See UNZ. 2015. Producing employable graduates – initiatives by New Zealand’s universities. Te Pokai Tara Universities New Zealand. See also Holland et al, 2024, *Work-integrated courses as an alternative tertiary education: lessons from UK, New Zealand and Canada*, WIL NZ 2024 Refereed Conference Proceedings for a discussion of the challenges of developing a qualification in New Zealand with work-integrated learning embedded

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- ^{xiii} Universities tend to focus on developing individual skills and attributes considered desirable by employers, in order to find and acquire suitable work, perform well in that work, and build a career. See: Rowe, A. D., & Zegwaard, K. E. (2017). Developing graduate employability skills and attributes: Curriculum enhancement through work-integrated learning. *Asia-Pacific Journal of Cooperative Education*, 18(2), 87–99.
- ^{xiv} Which some commentators argue may be unachievable. See Relly, S. J. (2022). Understanding the purpose and standing of technical and vocational education and training. In *The standing of vocational education and the occupations it serves: Current concerns and strategies for enhancing that standing* (pp. 49-62). Cham: Springer International Publishing. See also Murray N 2004 *Who gets their hands 'dirty' in the Knowledge Society? Training for the skilled trades in New Zealand*, PhD thesis, Lincoln University, which explores the disparity of esteem between industry training and academically focused education.
- ^{xv} For example, the government subsidy for work-based engineering training below degree-level including for diplomas at level 5 and 6 on the NZQCF is set at \$8,543 (GST exclusive) for 2025 while the rate for degree-level study (which may comprise learning at levels 5 and 6) is set at \$13,911. The funding differential is partly based on the difference in the estimated costs of delivering work-based and on-campus training.
- ^{xvi} Jones, J. 2023. Civil Construction: a requirement for a robust and reliable training pipeline. ConCOVE Tūhura. URL: <https://concove.ac.nz/discovery-hub/civil-construction-full-report/>
- ^{xvii} New Zealand Productivity Commission. (2017). *New models of tertiary education: Final Report*. Available from www.productivity.govt.nz/inquiry-content/tertiary-education.
- ^{xviii} Hurd, F & Dyer, S. 2024. On-site Upstanders: Building a Bystander Culture - A Framework to Eliminate Sexual Harassment & Hostile Work. ConCOVE Tūhura. URL: <https://concove.ac.nz/discovery-hub/on-site-upstanders-building-a-bystander-culture/>
- ^{xix} Angeli-Gordon, J. et al. 2024. Te Maru o Hine: A kaupapa māori theory of change for addressing sexual harassment against wāhine through tāne allyship. ConCOVE Tūhura. URL: <https://concove.ac.nz/discovery-hub/te-maru-o-hine-kaupapa-maori-theory-of-change-full-report/>