

Why a national industry policy & innovation and STEM strategy needs quality training

Key points

1. Enterprise and national productivity GDP are tied to the capability of Australia's own workforce.
2. Australia's workforce requires ongoing development, and TAFE has been fundamental delivering training – not only for individuals to have employability skills in metropolitan, rural and regional areas in Australia, but companies and SMEs requiring special skill upgrades, competition issues, and as technology requires safety and better performance.
3. More recently, TAFEs are foremost to 'close the gap' in indigenous training and employability skills, and for Manufacturing Industry Restructuring TAFE remains at the centre of many state and territory re-skilling programs.
4. TAFEs have long worked successfully with employers and their employees to upgrade skills through vocational and higher education qualifications and targeted skill sets. New federal Budget schemes for industry internships will add new capacity.
5. Workforce skills development is different to career preparation courses. It requires high levels of flexibility and is more expensive to deliver than traditional institutionally based training. Success relies on collaborative partnerships between enterprises and TAFE where TAFE is a workforce development partner.

TAFE is the provider of choice for training the existing workforce

Successful enterprise responses to competition and innovation rest on sustained, targeted and responsive workforce skills development.

Australian enterprises consistently turn, and return, to TAFE to upskill and reskill the existing workforce. TAFE has recognised expertise in responding to complex training needs involving specialist and technical skills, multi-site delivery for geographically dispersed workforces, and training along supply chains. TAFEs work closely with Job Networks and employment services, and will be supporting new internships under Budget 2016 proposals.

TAFE Directors Australia (TDA) commissioned more than 80 case studies demonstrating TAFE's expertise and innovative delivery. We note five extended industry studies researched by Dr. John Mitchell in 2013–14.¹ Summarising employer views, Mitchell notes that when asked what they most valued about TAFE, industry clients nominated 'flexibility' in the design and delivery of tailored training programs.

Since then, TAFE's focus has turned to innovation, STEM skills and entrepreneurial skills in support of the Commonwealth's National Innovation and Science Agenda. TAFE has a significant role to play. At least two-thirds of Australia's STEM-qualified population hold VET qualifications² and a higher proportion of owner-managers hold advanced diplomas or lower (19% STEM qualified and 17% for non-STEM qualified) compared to those with bachelor degrees or higher (12% and 14% respectively).³

TAFE is well positioned to partner with local enterprises to develop innovation and applied research capability in the workforce.

Broader applications of applied research can improve outcomes for VET students, and 'fill a serious gap in Australia's national innovation system'.⁴ This model has been highly successful in Canada. Applied research partnerships between public Community Colleges and local enterprises are now integral to Canada's innovation economy.⁵

Workforce Skills Development is different to Career Preparation Courses

Workforce development is conducted within the triangular relationship of TAFE – Employer – Student. The employer is an integral part of the learning with technical specialists and managers often co-opted into learning and assessment activities.

Workplace based students are existing workers and it is neither appropriate nor viable for them to spend large amounts of time away from the workplace. The advantage of workplace learning and assessment is the direct alignment with work and, in the most part, it meets the needs of both students and employers.

While delivering strong economic returns, workplace training is more expensive to deliver than classroom block delivery. Often it is conducted with small groups of employees perhaps at shift change in a mine, or early in the morning at a bakery.

Effective workforce training often utilises skill sets and customised units of competency linked to enterprise specific needs such as the requirement for licensed skills. Tailored training in the workplace is industry's preferred approach.

TAFE Directors Australia recommends that:

Industry and education policy, and related internship programs, capitalise on TAFE Institutes' expertise in workforce skills development. National Industry Policy for restructuring, and incentives under the National Innovation and Science Agenda (NISA), need to be linked and recognise the unique capacity for GDP growth by leading in vocational education.

Supporting displaced workers back into employment

Skill-sets are also useful in supporting workers who have been displaced due to industrial realignment to retain or regain productive employment. Much of the long-term decline in male workforce participation in Australia has been by those without a secondary school or other qualification.

Low levels of educational attainment and skills development make people highly vulnerable to industry restructures and workplace change⁶ and, when retrenched, they find it very difficult to re-enter the workforce.

In general, placing displaced workers into an institutional setting with career preparation students focussed does not work.

Displaced workers respond more readily and are more successful in quickly returning to paid employment when trained in TAFE skills development programs in workplace or simulated workplace settings rather than in career preparation programs that may take one year or more to complete.

TAFE Directors Australia recommends that:

TDA advocates more flexibility for funding of skill set qualifications, and other targeted modular forms of vocational training, to better match to fast-changing needs of industry and enterprises.

Skill set funding and Federal compacts with TAFEs for industry restructuring would equally apply to schemes for re-entry to employment for displaced workers.

- 1 Mitchell J, 2013, *Reinventing service delivery: Case studies of TAFE Institutes meeting industry needs and government goals*, TAFE Directors Australia: Sydney.
- 2 Office of the Chief Scientist, 2016, *Australia's STEM Workforce*, Canberra, page 10.
- 3 Office of the Chief Scientist, *ibid*, page 29.
- 4 Moodie, Gavin (2006). 'Vocational education institutions' role in national innovation', *Research in Post-compulsory Education*, 11(2), 131-140.
- 5 <http://www.collegesinstitutes.ca/policyfocus/applied-research/> Access date: 19 May 2016.
- 6 AWPA (2013). *Future Focus. 2013 National Workforce Development Strategy*, pg. 67.