



'NO FRILLS' DISCUSSION PAPER

Workforce-ready: challenges and opportunities for VET

Tabatha Griffin

National Centre for Vocational Education Research

The phrase 'workforce-ready' might bring several different scenarios to mind. It may conjure an image of graduates making their first foray into the world of work. Or perhaps it evokes a sense of preparing for future jobs, the details of which are not yet clear. It might also elicit thoughts of people needing to upskill, perhaps to re-enter the labour market after an absence, or in response to some change in their organisation or with their job. It could also mean something as simple as getting the necessary accreditation to work in a particular industry. The vocational education and training (VET) system plays a large role in meeting all these needs.

Workforce ready: challenges and opportunities for VET is the theme for the 29th National Vocational Education and Training Research Conference, 'No Frills'.

A large focus for the VET sector is on providing individuals with the skills they need to get a job or change jobs. This function of the VET sector is clearly reflected in the National Student Outcomes Survey, which shows that two commonly reported reasons why graduates undertook their training was to get a job (30.7% in 2019), or to try for a different career (11%; NCVET 2019a). ➤

This role is particularly pertinent in the current environment of substantial job losses due to the impact of the COVID-19 pandemic. Treasury expects the unemployment rate to rise to 10% in the June quarter, up from 5.1% (Frydenberg 2020). Young people are likely to be particularly affected, being overrepresented in the jobs hardest hit by the pandemic, for example, hospitality, retail, the arts, and sports and recreation. Many will explore training as a pathway to re-enter the labour market.

In recent years, increased globalisation, rapid technological progress and structural changes to the workforce (for example, emergence of the gig economy) have broadened the focus of VET to skilling for the future – a topic discussed in the 2017 No Frills discussion paper (Payton 2017). Indeed, the 2018 Select Committee for the Future of Work and Workers sought, among other things, to understand how to ensure that Australians have the knowledge and skills needed for the jobs of the future (Senate Select Committee on the Future of Work and Workers 2018).

In line with this theme, one of the key aims of the current Australian Government skills package *Delivering skills for today and tomorrow* is ‘to prepare Australians for the workforce opportunities of today and the future’ (Australian Government 2019a). Similarly, individual jurisdictions also shape their local policies and funding arrangements to provide for both current and future skills needs. For example, the VET department in New South Wales ‘identifies the qualifications [that] industry is looking for and works with employers and industry to adapt VET offerings to meet emerging skill needs’ (New South Wales Government 2018). Likewise in South Australia, the *Skilling South Australia* initiative is geared towards ‘the state’s skills needs now and in the future’ (Government of South Australia 2019).

Industry shares this dual-purpose view of VET, with the Australian Chamber of Commerce and Industry (ACCI 2019) also arguing that VET is ‘for the jobs of today and tomorrow’.

Does this pose a challenge for the VET sector? Or should it be considered an opportunity for the sector to assert itself in the Australian education landscape?

This No Frills discussion paper considers the balance between ensuring that people have the skills they need to work now and equipping them with the knowledge and/or skills that will enable them to adapt to the changes they will inevitably see in their working lives.



What does it mean to be workforce-ready?

Employability, another term we might use to describe work-readiness, has been defined in numerous ways. The definition below, provided by the Confederation of British Industry in partnership with Universities UK, describes both the elements and the beneficiaries of employability in an individual:

A set of attributes, skills and knowledge that all labour market participants should possess to ensure they have the capability of being effective in the workplace – to the benefit of themselves, their employer and the wider economy. (Confederation of British Industry 2009, p.8)

As large users of the VET sector, employers have expectations about how VET should prepare individuals for the workforce. As summarised by the Productivity Commission (2011), 'In practice, employers expect the VET sector and its workforce to deliver relevant high-quality education and training, leading to competent and work-ready employees' (p.101). This statement suggests that not only do employers expect VET students to possess the skills for which they've been accredited, but also to possess some other attributes, those that make them ready for the workplace.

Beyond having the technical skills required for the job, these other attributes are likely to include foundation skills and what have been described as broader employability skills. The Organisation for Economic Co-operation and Development (OECD 2013) supports this by stating that, in addition to occupation-specific skills, workers in the twenty-first century require a stock of other skills, including:

- / literacy and numeracy
- / problem-solving
- / communication
- / self-management
- / the ability to learn.

Further illustrating the importance of non-technical skills, 10 of the 16 'crucial proficiencies in the 21st century' identified by the World Economic Forum (2015) are non-technical (figure 1). Looking towards the future, Deloitte Access Economics (2017) forecasts that 'soft skill-intensive occupations will account for two-thirds of all jobs by 2030, compared to half of all jobs in 2000' (p.1).¹



¹ 'Soft skills' is another term often used to mean employability skills.

Not only is demand for these skills increasing, the diversity by which non-technical skills are described appears to be ever-growing. For example, the Select Committee on the Future of Work and Workers heard that employers are looking for graduates with the following skills (University of Technology Sydney, in Senate Select Committee on the Future of Work and Workers 2018, submission 81, p.3):

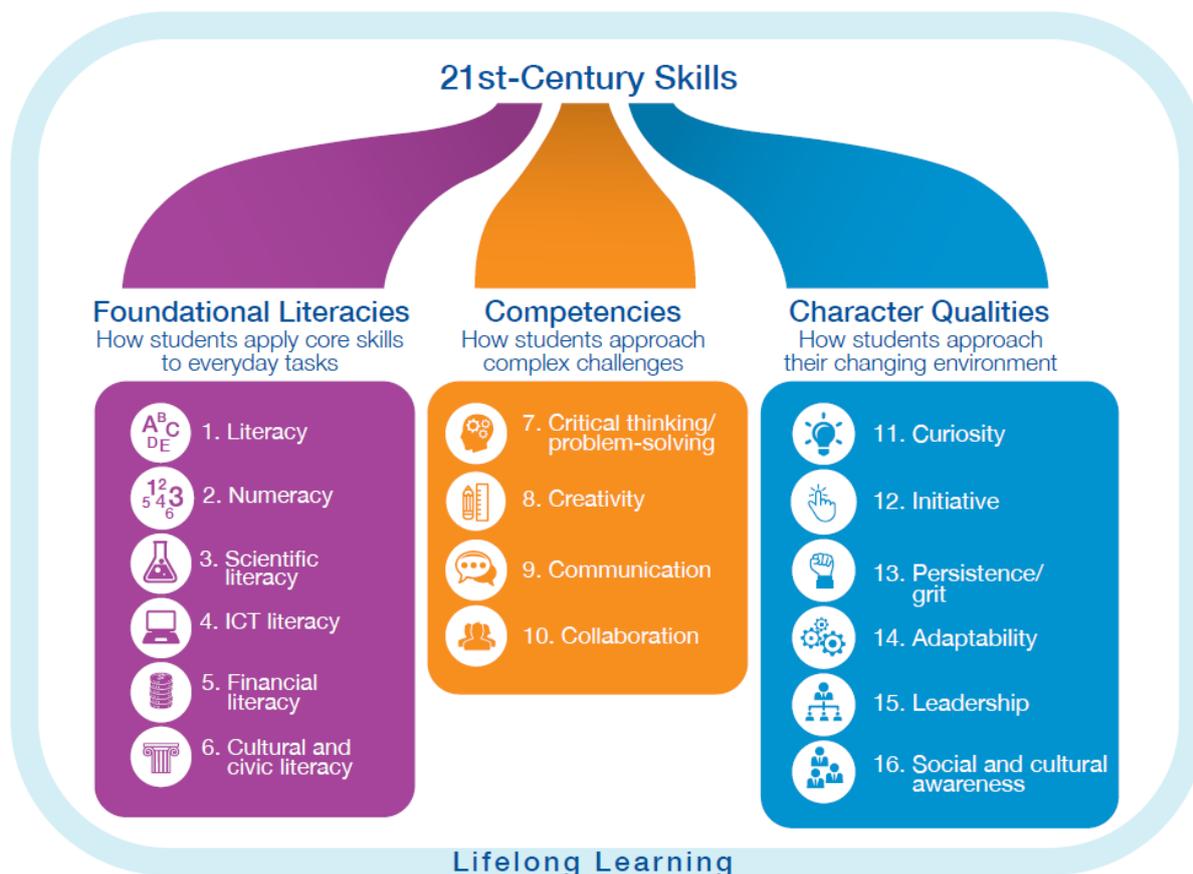
- / sense-making
- / social intelligence
- / novel and adaptive thinking
- / cross-cultural competency
- / computational thinking
- / new-media literacy
- / transdisciplinary knowledge/skills
- / design mindset
- / cognitive load management
- / virtual collaboration.



The increasing demand for non-technical skills is elaborated in the 2018 No Frills discussion paper (Payton & Knight 2018).

Considering what makes an individual workforce-ready, is it simply having the ‘right’ combination of technical and non-technical skills? Or is there some other, potentially less tangible, element? These questions are very difficult to answer. The VET sector’s remit, however, concerns the development of skills, and hence this is discussed further below.

Figure 1 Twenty-first-century skills identified by the World Economic Forum



Source: World Economic Forum (2015, p.3).



Can VET develop workforce-readiness?

Here we consider the VET sector's ability to effectively develop both the technical and non-technical skills considered necessary to be workforce-ready.

Technical skill development

One way to look at how well Australia's VET sector is delivering the technical skills needed to ensure an individual is workforce-ready is to examine employer satisfaction with training. Employers engage with the VET system in a variety of ways; for example, having jobs that require vocational qualifications, hosting apprentices and trainees, and using nationally recognised training. NCVER's Survey of Employer Use and Views shows that employer satisfaction with VET is reasonably high; however, around 13% of employers who require their employees to hold vocational qualifications relevant to their jobs are dissatisfied with these vocational qualifications, in terms of employees gaining the requisite job skills (NCVER 2019b). Of those who were dissatisfied, the main reasons reported were:

- // training of poor quality or low standard (56.5%)
- // relevant skills not taught (44.4%)
- // not enough focus on practical skills (41.7%) (NCVER 2019b).

While employer satisfaction with graduates is generally high, satisfaction levels vary considerably by industry. For example, the proportion of employers satisfied with vocational qualifications as a job requirement ranged from 97.4% in the electricity, gas, water and waste services industry, to 59.6%² in rental, hiring and real estate services, and 61.1% in other services (NCVER 2019b). These findings provide some indication that not all VET graduates are necessarily considered workforce-ready by employers in terms of their technical skills.

Employer satisfaction with the skills of graduates is only one part of the picture. Around 43% of employers indicated that their businesses faced recruitment difficulties in 2019. Of these, around 56% reported that this was due to a limited number of applicants for the available positions, while 54% reported a shortage of skilled people in the industry (NCVER 2019b).

² This estimate should be used with caution as it has a margin of error greater than or equal to 10% (NCVER 2019).

These figures suggest that the VET sector may not be producing enough graduates in areas of need (a supply and demand mismatch), or that there is a deficiency among some applicants in the technical skills required for the job. These issues can be exacerbated by misalignment between employer needs and the skills developed in training, perhaps due to a lack of responsiveness in the sector to changing skill needs.

How best to involve industry in driving the direction of training in order to minimise this misalignment has been an enduring quest in the Australian VET sector. The current mechanism is through the Australian Industry and Skills Committee (the AISC) and its network of industry reference committees (IRCs), which aim to assist employers to contribute to the development of training packages.

It has been noted through the Select Committee on the Future of Work and Workers, however, that the sector currently lacks access to high-level strategic advice on employment forecasting such as that previously provided by the now-defunct Australian Workplace and Productivity Agency, and before that, Skills Australia (Senate Select Committee on the Future of Work and Workers 2018). To address this, and to complement the input from industry through the AISC, the National Skills Commission has been formed (commencing July 2020), whose aim is to undertake research and analysis of future skills needs across industry to ensure that government funding addresses national labour market priorities, including those arising from developing technologies (Australian Government 2020).

VET's role in developing non-technical skills

How does VET respond to the increasing demand for a diverse array of non-technical skills? Questions associated with the development of non-technical skills are not limited to the VET sector. Both schools and universities have been criticised for not providing students with the necessary soft, or employability, skills needed for the workforce. Indeed, the Australian Industry Group (AIG; Taylor 2016) reports that the highest levels of employer dissatisfaction with recruited higher education graduates lie in problem-solving, capacity to learn, self-management and teamwork skills. The AIG report goes on to call for higher education teaching and learning practices to embed employability into the core of the curriculum.

Does the VET sector also have a responsibility to ensure its graduates have these non-technical skills? The idea of ensuring that employability skills are developed through VET is not a new one. In 2005, the National Quality Council provided endorsement for employability skills to be made explicit in training packages (Wibrow 2011). The current Standards for Training Packages require that foundation skills (language, literacy, numeracy and employment skills) be explicitly specified for each unit where they are essential to performance (National Skills Standards Council 2012).

The skills of interest are the five core skills of the Australian Core Skills Framework (ACSF), along with employability skills or the Core Skills for Work Framework (Australian Skills Quality Authority 2020):

- / reading skills
- / writing skills
- / oral communication
- / numeracy skills
- / learning skills
- / problem-solving skills
- / initiative and enterprise skills
- / teamwork skills
- / planning and organising skills
- / self-management skills
- / technology skills

While the customary language, literacy and numeracy skills are represented, the employability skills do not necessarily match the increasingly diverse and often specific employability skills being requested by employers (as discussed above).





It is not realistic or practical, though, to continually update the group of non-technical skills that are to be included across the breadth of available training packages. The employability skills listed here, however, are of a reasonably high level, and are contextualised in the documentation of training units, making them more specific to the tasks required in the associated jobs.

The Australian Skills Quality Authority (2020) states that foundation skills are an integral part of a unit of competency and must be assessed. That said, some uncertainty has been reported among teachers about how to teach and assess them (Wibrow 2011). There have been numerous attempts to address these difficulties, including the development of the now-defunct Foundation Skills Assessment Tool (Australian Government 2019b), the requirement for all trainers to complete the language, literacy and numeracy (LLN) unit of the Certificate IV in Training and Assessment (Council of Australian Governments 2012), and the offer of training and information sessions for VET practitioners through professional development organisations such as Velg Training and the VET Development Centre.

While foundation skills training is embedded in training packages, individuals can also undertake VET courses specifically designed to develop employability skills (Australian Government 2018a). These courses may be useful for those individuals who do not want or need technical skill training but who need to improve their employability skills in order to improve their work-readiness.

Perhaps one of the best ways to become workforce-ready is to learn and gain experience in the workplace.

Developing workforce-ready skills in the workplace

Education and training programs that include workplace learning are well regarded by employers, as demonstrated by the Australian Industry Group's call for the promotion of workplace learning as a key component in all post-secondary education (Taylor 2019).

Indeed, there is a trend in the higher education sector for universities to provide the opportunity for undergraduates to interact with industry and business through internships and work experience. This has been enabled through the National Strategy on Work-Integrated Learning (WIL) in University Education – a landmark strategy in the higher education sector, which was implemented with the aim of producing ‘job ready’ graduates across Australian universities (Universities Australia et al. 2015).

WIL is aimed at improving the employability of graduates by giving them valuable practical experience which is directly related to courses being studied at university.

(Universities Australia et al. 2015, p.1)

This issue of teaching employability to university graduates through exposure to workplaces was also discussed by the Select Committee on the Future of Work and Workers, referring to a submission from the Australian National University supporting stronger links between universities and the business community (Australian National University, in Senate Select Committee on the Future of Work and Workers 2018, Submission 12, p.2).

Strong linkages between education and industry are already a characteristic and strength of the Australian VET sector, which is promoted as an industry-driven education and training system. Work-based learning and the inclusion of the world of work into students’ learning is at the heart of the VET system (Atkinson 2016). Traditionally, this has been achieved through apprenticeships and traineeships, which have a strong focus on on-the-job training, but also through work-oriented institutional training.

Given the employment-based arrangement of apprenticeships, there is still a desire by employers for new apprentices to be somewhat workforce-ready upon commencement. By equipping future apprentices with job-readiness skills and industry understanding from the outset, pre-apprenticeship programs can be useful for this purpose. Such programs ensure that apprentices achieve a degree of productivity when they start their apprenticeship, thus enhancing their economic viability for employers (Couldrey & Loveder 2016). While some level of job-readiness on the commencement of an apprenticeship may be useful, there is no doubt that undertaking an apprenticeship is a good way to develop employability skills, skills that will not only be useful in future jobs but will also help in weathering the ups and downs of life (New South Wales Government 2018b).

The success of the apprenticeship model in delivering workforce skills has led to an interest in broadening the use of the model ‘beyond the traditional trade base to include higher-level qualifications, new occupations and emerging areas of the economy’ (Australian Chamber of Commerce and Industry, Australian Industry Group & Business Council of Australia 2017, p.7). Indeed, the Australian Government-funded project, ‘Apprenticeship training – alternative delivery pilots’, explored the expanded use of the apprenticeship model (Australian Government 2015), and the concept of apprenticeship-like training is now being included in policy (Australian Government 2018b). There are likely further opportunities for the VET sector to explore this model of training to develop workforce-ready graduates.

The VET sector also has a strong history of providing opportunities for students to develop work-readiness skills through activities such as work placements. There could be scope to roll these out more broadly. Despite the strong industry linkages with the VET sector, however, there are still challenges in engaging employers in work-based learning, with the largest barrier being a lack of time or resources to host students (Atkinson 2016). Additionally, it is worth mentioning that restrictions on businesses due to the current global pandemic are having a detrimental effect on work-placement opportunities: ‘University and TAFE students in the final years of their program have had placements and internships cancelled or moved online’ (ABC 2020). One would assume that, as the crisis eases, opportunities for work placements can be reinstated.



Preparing students *now* for the future

Looking into the crystal ball

In a paper commissioned by the Australian Industry Skills Committee, Bowles (2017, p.3) provides the following insight:

A successful VET strategy must promote training packages and competencies that alleviate public anxiety by encouraging constructive thinking about the future workforce skills that Australia must develop to remain competitive in a global economy. The focus has to shift to future employability and growing industry competitiveness, not just ensuring a person is competent to perform in a current job role.

Thinking about how jobs are changing and what this means for the current and future workforce has international significance. The OECD's *Employment outlook 2019: the future of work* points to digitalisation, globalisation and demographic factors as having a profound effect on the jobs we have and how we work. New technologies are allowing for new business models and innovative ways of working (OECD 2019). Middle-skilled jobs are particularly vulnerable to this transformation, with the OECD estimating that 14% of jobs could disappear as a result of automation, with a further 32% likely to change radically as individual tasks are automated.

Efforts have been made to identify emerging employment opportunities on a global scale. For example, the World Economic Forum (2020) reports that demand for both 'digital' and 'human' factors is driving growth in the professions of the future. They further explain:

Indeed, the future of work shows demand for a broad variety of skills that match these professional opportunities, inclusive of both disruptive technical skills but also specialised industry skills and core business skills. (World Economic Forum 2020, p.4.)

The challenge for the VET sector in preparing individuals for the jobs of the future is the uncertainty around what those jobs will be, and the associated skills required. New ways to predict future skill needs may be necessary. As Payton (2017) surmised, we may not be able to predict the new jobs that will arise from new technologies, but we may be able to use machines and 'big data' to predict the skills that people will need. But how this type of intelligence might feed into the VET system to ensure graduates are ready to tackle the future is yet to be explored.

Some shocks to the workforce are difficult, if not impossible, to predict. The current COVID-19 pandemic is having a global impact on all aspects of the lives of all people, including in the workplace and in the broader labour market. While the longer-term effects are yet to be realised, the immediate effects have included massive job losses and changes to the way in which people work, with many individuals now working remotely or having to provide services or products in a different manner. How can VET ensure that workers are well placed to respond to the unpredictable?

In the international landscape, a recent report suggests that, in terms of skill needs, varying degrees of urgency apply across the world. The readiness of adult learning systems to address future skill challenges across different OECD countries has been explored by Forti, Meierkord and Vandeweyer (2019), who compare countries along seven dimensions: urgency; coverage; inclusiveness; flexibility and guidance; alignment with skill needs; perceived training impact; and financing. By comparison with other countries, Australia was found to perform well in terms of urgency (meaning there is low urgency) and alignment (in the top third of countries for both those dimensions), but poorly on the flexibility dimension (bottom third of countries).

It should be noted that the levels of urgency reported by Forti, Meierkord and Vandeweyer (2019) are relative and hence even countries with low scores may still have strong reform needs. Indeed, business and industry peak bodies in Australia are calling for action. For example, the Australian Industry Group (Taylor 2019) notes the shift towards a knowledge society and questions the ability of the tertiary education sector in its current form to provide the increasingly higher levels of knowledge and skills required for the workforce. Similarly, the Australian Chamber of Commerce and Industry (2019) points to the persistently high levels of underemployment and youth unemployment in its demand for a more efficient education and training system, one that delivers the skills needed for Australia's modern economy. The sense of urgency is likely to increase as the longer-term ramifications of the current global pandemic unfold.

At the firm level, Forti, Meierkord and Vandeweyer (2019) report that only two in three firms across the OECD assess their future skill needs. This creates a challenge for the VET sector. To address this, the recently established National Skills Commission will undertake research and analysis of future skills needs across industries to better align government funding with labour market demands (Council of Australian Governments 2020). For this intelligence to be of most use, however, the system must be responsive enough to use it in a timely manner.

Improving the responsiveness of the Australian VET sector to changing labour market needs has been an enduring goal, one often included as an aim in many of the policies implemented over the past couple of decades (Atkinson & Stanwick 2016). The Joyce (2019) review pointed to slow qualification development as an issue and recommended that consideration be given to the further use of short-form credentials, such as skillsets or micro-credentials, to provide faster and more flexible training options.

Interestingly, the current crisis due to COVID-19 has compelled governments and other organisations across the world to take quick action on many fronts, including in all levels of education. In Australia's post-secondary education sector, the actions taken include:

- / various initiatives by individual jurisdictions, including additional funding to their local VET systems and the provision of training for individuals whose employment has been affected by the pandemic; offerings have included free courses and free skill sets for those wanting to upskill during the pandemic
- / a massive shift to online delivery of education and training in both the VET and higher education sectors
- / the development of a sub-committee of the Australian Industry and Skills Committee (AISC) to drive the rapid and flexible development of training packages during the crisis (Cash & Irons 2020a)



- ✓ the provision of heavily subsidised short online higher education courses in national priority areas (Tehan & Cash 2020)
- ✓ wage subsidies for apprentices and trainees (Cash & Irons 2020b)
- ✓ launch of the apprentice and trainee re-engagement register (National Apprentice Employment Network 2020)
- ✓ relaxation of international student nurse visa conditions (Morrison 2020).

These initiatives show that, despite previous criticisms of a lack of flexibility and responsiveness in Australia's post-secondary education system, increased agility has been demonstrated in the face of adversity.

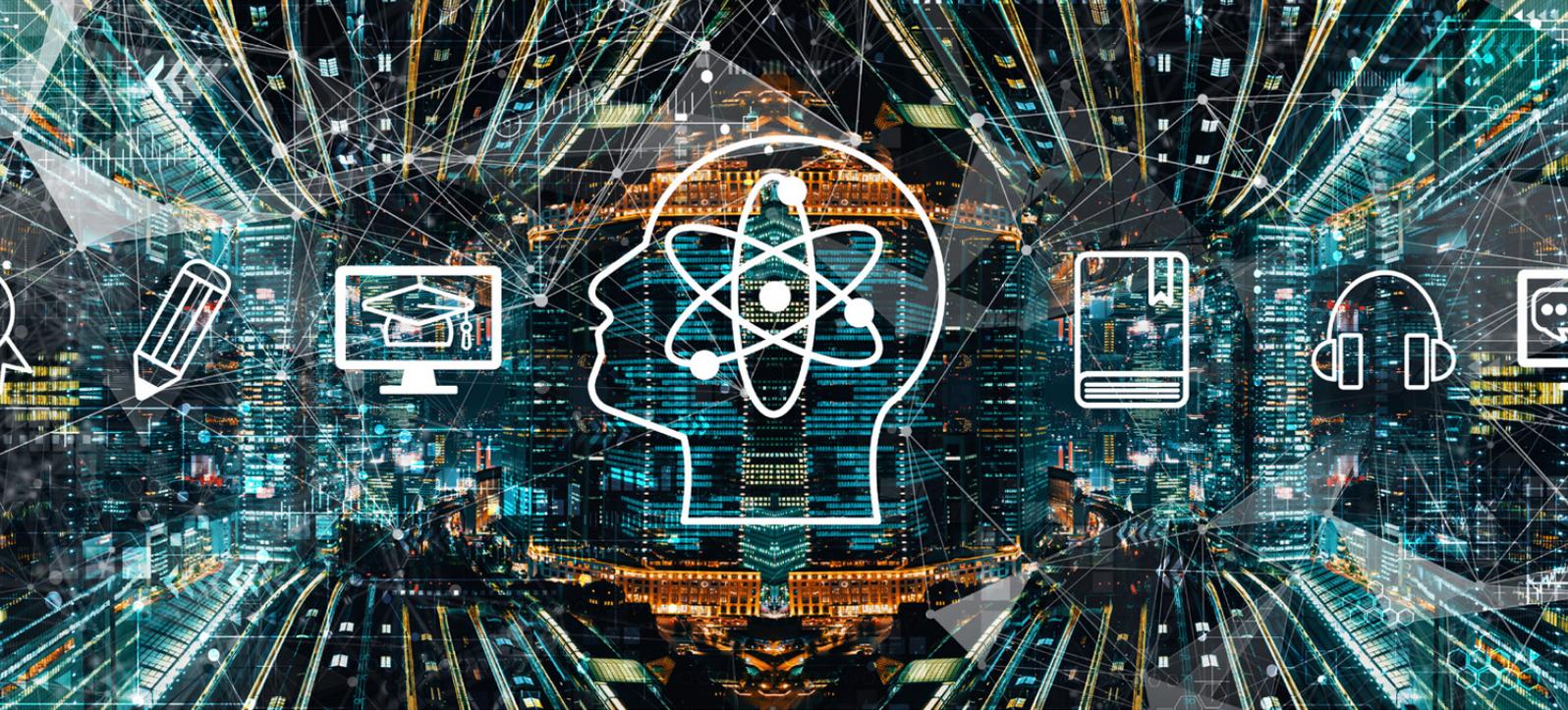


How can VET future-proof graduates for the unknown?

Preparing for the future means that 'no longer are we developing qualifications for a world where your entry qualification is designed to set you up for the remainder of your working life' (Australian Industry Group 2020, p.1). There is an expectation that an individual's skills will need to evolve, and that their knowledge will grow in response to changing work requirements over their working life. People will need to continually upskill, especially because of technological change.

To do this, the graduates of today need to embrace the concept of lifelong learning as they move through different stages of life and work. As described in last year's No Frills discussion paper, lifelong learning is the key to successfully entering, navigating and changing jobs and careers (Osborne, Loveder & Knight 2019). Indeed, the World Economic Forum emphasised the importance of lifelong learning, with it depicted as encompassing the skills required for the twenty-first century (figure 1).

VET, alone, cannot instil the concept of lifelong learning in individuals or in society more broadly. Creating a culture of lifelong learning requires a collaborative response from industry, government and the tertiary education sector and needs flexible pathways, along with offerings that can be individually tailored to navigate the world of work (Australian Technology Network of Universities & PriceWaterhouseCoopers Australia 2018). The nature of the VET sector means it is in a good position to support this concept. Osborne, Loveder and Knight (2019) point to the different skilling types offered by the VET sector – initial skilling, upskilling and reskilling – as important in supporting individuals' skilling needs throughout their lives. Additionally, the ability for the VET sector to provide diverse forms of training (formal versus informal, full qualifications versus skill sets, for example) is important in ensuring it is fit for purpose in the lifelong learning journey.



Final thoughts

Workforce-ready means having the technical and employability skills to participate productively in the workforce, as well as to embrace the concept of lifelong learning, enabling adaptability to changing work conditions. In its current form, the VET sector already supports much of this. Despite this, there have been criticisms about a lack of flexibility in the system and there are challenges in preparing for an unknown future.

VET is not alone in the drive to produce workforce-ready individuals. Given the nature of rapidly changing workplaces and the need for agile skill development, the Australian Industry Group (Taylor 2019, p.3) argues that there needs to be 'a more effective system of learner mobility and recognition between institutions and sectors'. This reiterates the call for a more cohesive tertiary education sector, as argued in the Bradley review (2008). With the increasing use of work-based learning in both higher education and VET, a strengthening focus on developing employability skills, and calls for stronger linkages between education and industry/business, it could be argued that there are growing commonalities that form the foundation of a more interconnected system, one with the capacity to help ensure that individuals are workplace-ready, now and for the future.

References

- ABC 2020, 'History suggests youth unemployment will surge, pain will last a decade after coronavirus crisis', viewed 16 April 2020, <<https://www.abc.net.au/news/2020-04-16/history-suggests-youth-unemployment-will-surge-coronavirus/12151668>>.
- Atkinson, G 2016, *Work-based learning and work-integrated learning: fostering engagement with employers*, NCVET, Adelaide.
- Atkinson, G & Stanwick, J 2016, *Trends in VET: policy and participation*, NCVET, Adelaide, viewed 18 April 2020, <<https://www.ncver.edu.au/publications/publications/all-publications/trends-in-vet-policy-and-participation>>.
- Australian Chamber of Commerce and Industry, Australian Industry Group & Business Council of Australia 2017, 'Governments need to make 2017 the year of vocational education and training', viewed September 2018, <http://cdn.aigroup.com.au/Reports/2017/ACCI_AiGroup_BCA_National_Partnership_on_Apprenticeship_Reform.pdf>.
- Australian Chamber of Commerce and Industry 2019, *Getting on with business: business policy priorities for the next federal government*, ACCI, [Canberra], viewed 18 April 2020, <<https://www.australianchamber.com.au/wp-content/uploads/2019/05/ONLINE-GOWB-May-2019-1.pdf>>.
- Australian Chamber of Commerce and Industry & Business Council of Australia 2002, *Employability skills for the future*, Skills framework (Australia), Department of Education, Science and Training, Canberra.
- Australian Government 2015, 'Apprenticeship training – alternative delivery pilots', viewed 21 February 2018, <<https://www.australianapprenticeships.gov.au/alt-del-pilots>>.
- 2018a, *Employability skills training*, viewed 16 April 2020, <<https://www.employment.gov.au/employability-skills-training>>.
- 2018b, 'National Partnership on the Skilling Australians Fund', COAG, Canberra, viewed 17 April 2020, <<http://www.federalfinancialrelations.gov.au/content/npa/skills.aspx>>.
- 2019a, 'Delivering skills for today and tomorrow', viewed 3 March 2020, <<https://www.employment.gov.au/delivering-skills-today-and-tomorrow>>.
- 2019b, 'Foundation skills assessment tool', viewed 15 April 2020, <<https://www.employment.gov.au/foundation-skills-assessment-tool>>.
- 2020, 'National Skills Commission', viewed 18 March 2020, <<https://www.employment.gov.au/NSC>>.
- Australian Industry Group 2020, *Reimagining vocational qualifications*, Ai Group, Sydney, viewed 11 May 2020, <https://cdn.aigroup.com.au/Workforce_Development/Reimagining_Vocational_Qualifications.pdf>.
- Australian Skills Quality Authority 2020, 'Users' guide to standards for VET accredited courses VAC 7.4', viewed 15 April 2020, <<https://www.asqa.gov.au/standards-vac/7.4>>.
- Australian Technology Network of Universities & PricewaterhouseCoopers Australia 2018, *Lifelong skills: equipping Australians for the future of work*, Australian Technology Network of Universities, Deakin, viewed 18 April 2020, <<http://www.atn.edu.au/siteassets/publications/lifelong-skills.pdf>>.
- Bowles, M 2017, *Automation: implications for training packages*, Skills Impact, Melbourne, viewed 16 March 2020, <<https://bit.ly/2nDK8FQ>>.
- Bradley, D, Noonan, P, Nugent, H & Scales, B 2008, *Review of Australian higher education: final report*, the Bradley review, DEEWR, Canberra.
- Cash, M & Irons, S 2020b, 'Fast-tracking training and skills during COVID-19, joint media release, 3 April 2020', viewed 11 May 2020, <<https://ministers.dese.gov.au/cash/fast-tracking-training-and-skills-during-covid-19>>.

- 2020b, '\$13 billion to support apprentices and trainees now available to small businesses, joint media release, 3 May 2020', viewed 8 May 2020, <<https://ministers.dese.gov.au/cash/13-billion-support-apprentices-and-trainees-now-available-small-businesses>>.
- Confederation of British Industry 2009, *Future fit: preparing graduates for the world of work*, CBI, London, viewed 16 March 2020, <https://web.archive.org/web/20090612011519/http://highereducation.cbi.org.uk/uploaded/HRE_091_Future%20Fit%20AW.pdf>.
- Couldrey, M & Loveder, P 2017, 'The future of Australian apprenticeships: report of the stakeholder forum', NCVER, Adelaide, paper presented at the Future of Australian Apprenticeships Stakeholder Forum, viewed 18 April 2020, <<https://www.ncver.edu.au/publications/publications/all-publications/the-future-of-australian-apprenticeships-report-of-the-stakeholder-forum>>.
- Council of Australian Governments 2020, 'COAG meeting communiqué', 13 March 2020, viewed 18 April 2020, <<https://www.coag.gov.au/meeting-outcomes/coag-meeting-communiqué-13-march-2020>>.
- Council of Australian Governments Standing Council on Tertiary Education, Skills and Employment 2012, *National Foundation Skills Strategy for Adults*, SCOTese, Brisbane, viewed 15 April 2020, <<https://docs.education.gov.au/node/40861>>.
- Deloitte Access Economics 2017, *Soft skills for business success*, Deloitte Access Economics, Sydney, viewed 18 April 2020, <<https://www2.deloitte.com/au/en/pages/economics/articles/soft-skills-business-success.html>>.
- Forti A, Meierkord, A & Vandeweyer, M 2019, Getting skills right: future-ready adult learning systems, Getting skills right, OECD, Paris, viewed 18 April 2020, <https://www.skillsforemployment.org/KSP/en/Details/?dn=EDMSP1_234224>.
- Frydenberg, J 2020, 'Jobkeeper payment supporting millions of jobs', Media release, 14 April 2020, viewed 18 April 2020, <<https://ministers.treasury.gov.au/ministers/josh-frydenberg-2018/media-releases/jobkeeper-payment-supporting-millions-jobs>>.
- Government of South Australia 2019, *Skilling South Australia*, viewed 4 May 2020, <<https://innovationandskills.sa.gov.au/skills/skilling-south-australia>>.
- Joyce, S 2019, *Strengthening skills: expert review of Australia's vocational education and training system*, the Joyce review, Department of the Prime Minister and Cabinet, Canberra, viewed 18 April 2020, <<https://pmc.gov.au/resource-centre/domestic-policy/vet-review/strengthening-skills-expert-review-australias-vocational-education-and-training-system>>.
- Morrison, S 2020, 'Update on Corona virus measures', media statement 18 March 2020, viewed 8 May, <<https://www.pm.gov.au/media/update-coronavirus-measures>>.
- National Apprentice Employment Network 2020, 'National register will connect apprentices and trainees with employers to safeguard jobs and careers', press release, 9 April 2020, viewed 8 May 2020, <<https://aenwa.com.au/media-release/national-apprentice-and-trainee-re-engagement/>>.
- National Skills Standards Council 2012, *Standards for training packages [2012]*, Training package organising framework, NSSC, Melbourne.
- NCVER (National Centre for Vocational Education Research) 2019a, *Australian vocational education and training statistics: VET student outcomes 2019*, NCVER, Adelaide, viewed 21 May 2020, <<https://www.ncver.edu.au/research-and-statistics/publications/all-publications/vet-student-outcomes-2019>>.
- NCVER (National Centre for Vocational Education Research) 2019b, *Employers' use and views of the VET system 2019*, NCVER, Adelaide.
- New South Wales Government 2018a, About us, viewed 4 May 2020, <https://vet.nsw.gov.au/about-vet/about-us#How_we_help>.

- 2018b, '5 skills you'll learn as an apprentice that will take you through life', viewed 16 April 2020, <<https://vet.nsw.gov.au/news/5-skills-youll-learn-as-an-apprentice-that-will-take-you-through-life>>.
- OECD (Organisation for Economic Co-operation and Development) 2013, *OECD skills outlook 2013: first results from the survey of adult skills*, OECD Publishing, viewed 18 April 2020 <<http://dx.doi.org/10.1787/9789264204256-en>>.
- 2019, *OECD employment outlook 2019: the future of work*, OECD employment outlook, OECD, Paris, viewed 18 April 2020, <https://www.skillsforemployment.org/KSP/en/Details/?dn=EDMSP1_241224>.
- Osborne, K, Loveder, P & Knight, G 2019, *The student journey: skilling for life*, NCVET, Adelaide, viewed 18 April 2020, <<https://www.ncver.edu.au/research-and-statistics/publications/all-publications/the-student-journey-skilling-for-life>>.
- Payton, A 2017, *Skilling for tomorrow*, NCVET, Adelaide, viewed 18 April 2020, <<https://www.ncver.edu.au/publications/publications/all-publications/skilling-for-tomorrow>>.
- Payton, A & Knight, G 2018, *Skills for a global future*, NCVET, Adelaide, viewed 18 April 2020, <<https://www.ncver.edu.au/research-and-statistics/publications/all-publications/skills-for-a-global-future>>.
- Productivity Commission 2011, *Vocational education and training workforce*, research report, Canberra.
- Senate Select Committee on the Future of Work and Workers, *Hope is not a strategy – our shared responsibility for the future of work and workers*, report of the select committee, viewed 18 April 2020, <https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Future_of_Work_and_Workers/FutureofWork/Report>.
- Taylor, M 2019, *Realising potential: solving Australia's tertiary education challenge*, Australian Industry Group, Sydney, viewed 18 April 2020, <https://cdn.aigroup.com.au/Reports/2019/REALISING_POTENTIAL.pdf>.
- Tehan, D & Cash, M 2020, 'Higher education relief package', joint media release, 12 April 2020, viewed 8 May 2020, <<https://ministers.dese.gov.au/tehan/higher-education-relief-package>>.
- Universities Australia, Australian Chamber of Commerce and Industry, Australian Industry Group, Business Council of Australia & Australian Collaborative Education Network 2015, *National strategy on work integrated learning in university education*, Universities Australia, Deakin, viewed 16 March 2020, <<http://cdn1.acen.edu.au/wp-content/uploads/2015/03/National-WIL-Strategy-in-university-education-032015.pdf>>.
- Wibrow, B 2011, *Employability skills: at a glance*, NCVET, Adelaide.
- World Economic Forum 2015, *New vision for education: unlocking the potential of technology*, Geneva, viewed 13 March 2020, <http://www3.weforum.org/docs/WEFUSA_NewVisionforEducation_Report2015.pdf>.
- 2020, *Jobs of tomorrow: mapping opportunity in the new economy*, Geneva, viewed 18 April 2020, <<https://www.weforum.org/reports/jobs-of-tomorrow-mapping-opportunity-in-the-new-economy>>.

© National Centre for Vocational Education Research, 2020



With the exception of cover design, artwork, photographs, all logos, and any other material where copyright is owned by a third party, all material presented in this document is provided under a Creative Commons Attribution 3.0 Australia <<http://creativecommons.org/licenses/by/3.0/au>>.

This document should be attributed as NCVER 2020, *Workforce-ready: challenges and opportunities for VET*, NCVER, Adelaide.

Stock images sourced from Getty Images.

ISBN 978-1-925717-54-9

TD/TNC 140.07

Published by NCVER, ABN 87 007 967 311
Level 5, 60 Light Square, Adelaide SA 5000
PO Box 8288 Station Arcade, Adelaide SA 5000, Australia
Phone +61 8 8230 8400 Email ncver@ncver.edu.au
Web <<https://www.ncver.edu.au>>

Follow us:  <<https://twitter.com/ncver>>  <<https://www.linkedin.com/company/ncver>>

