
**MANAGING AUSTRALIAN VOCATIONAL EDUCATION AND
TRAINING FOR ECONOMIC RECOVERY**

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Abstract

This paper considers current government policy, industry trends and needs, and a range of stakeholder views related to the roles played by Vocational Education and Training in Australia's post COVID-19 pandemic economic recovery. The discussion addresses opportunities for training providers to position themselves to maximise their returns and their contribution to economic recovery. Training and labour market cycles are considered from the perspective of the Cobweb Model and contextualised to post pandemic recovery. Recommendations are made around the training delivery approaches and strategies that can be applied including innovative industry based approaches such as paid internships, mentoring, and community service and delivery methods such as online qualifications, business certifications, and micro-credentials over a range of products including combined certificates and short courses.

Keywords: Training, Vocational Education, Australian Economy, Labour demands, Job Market, Economic Recovery, Post Pandemic

1. Introduction

In general, it is noted that education and training and economic growth are connected, where attaining a more skilled workforce helps businesses to take advantage of new economic opportunities, contributing to better performance and growth. Economic growth can then contribute to higher national and personal income, which improves the available capital and subsequent opportunities. The Australian governments, both federal and state or territory, through policy and provision of funding and incentives, recognise the role of the Vocational Education and Training (VET) sector as a foundation for meeting post COVID-19 economic recovery objectives.

The current economic and cultural environment provides a framework for training providers to be instrumental in the economic recovery. In order to maximise these opportunities, training providers should review and adjust their training delivery and assessment strategies to be able meet the sudden demands. Many Australians will need to reskill or upskill, which is why it is so important that an effective VET system is in place, given the jobs generated from the COVID-19 pandemic in the recovery era will not be the same as the jobs lost.

2. Method

The discussion and conclusions drawn are based on a literature review together with definitions and contextualisation of relevant economic theories. This exploration considers current labour market needs resulting from Australia's response to the COVID-19 pandemic with a view to

provide guidance for Australian training providers and is essentially instructive in its nature. Conclusions are drawn based on the discussion with an objective to present a viewpoint.

3. Discussion

3.1 Vocational and Technical Education as an Economic Contributor

Policymakers worldwide tend to support the assumption that investment in education and training, including VET, is a positive thing, with strong commitment to investing in human capital as a way of ensuring higher economic growth and national stability, as well as achieving equity objectives (Hanushek and Woessmann, 2008). Radcliffe (2020) suggests that the education and training of the population of a country is a major factor in deciding how well the economy of the country can do. Radcliffe explains that at a stage where it holds a competitive edge over other countries' economies, a strong economy has a workforce capable of running industries. In order to achieve this goal, countries may provide training incentives by means of tax breaks, providing facilities to train employees, or a variety of other means designed to build a more skilled workforce. As a key concept, countries with a larger share of their population attending and graduating from education and training programs are experiencing higher economic growth than countries with less-educated workers (Radcliffe, 2020).

Vocational Education and Training (VET) has a pivotal role to play in both the post-pandemic economic recovery and in the re-skilling and up-skilling of workers to deal with the current crisis (NCVER, 2020). Government across all levels in Australia acknowledges the importance of training and education in economic recovery. As an example, the Victoria State Government (2020) recognises the value of international education as a “sector vital to the future economic prosperity of Victoria and a source of future employment for Victorians”. They note that for over a decade, international education has been Victoria's largest services export generating a record high \$13.7 billion in revenue in 2019. In Victoria alone, the sector supported almost 79,000 jobs in 2018 (Victoria State Government, 2020). The Victorian government identifies delivery of international education as a priority industry many economic, social and cultural values to Victoria.

The NSW Government (2020) advises that it is currently undertaking a review of the TAFE and the Vocational Education and Training (VET) sector utilised in that state. The aim of the review is to help the system respond to skills shortages in areas such as automotive and engineering, construction and healthcare, and skilling workers in the developing industries of the future. Further, there is a move to greater industry partnership whereby in co-designing courses with public education suppliers, modelling popular projects in Germany, the United States and the United Kingdom, programs that are nationally and internationally competitive, and a desirable option for school leavers could more effectively be formed.

Likewise, the Tasmanian government has made available funding of up to \$3 million as part of the Tasmanian Government's Skills Fund designed to ensure there is a stable pool of skilled workers in areas of high skills demand in priority industries, and addresses identified skills gaps across the state by giving workers access to training. The Fund focuses on sectors such as

tourism and hospitality, building and construction, manufacturing, Information and Communication Technologies, aged and disability services, agriculture and aquaculture, as well as transport and logistics.

The federal government recognises manufacturing as a key contributor to job creation and growth. This is based on the notion that not only will the local manufacturing sector help with the economic recovery from the pandemic, but it will also create global business opportunities. The Department of Industry, Science, Energy and Resources (2020) identifies that Rapid industrialisation and population growth are contributing to shifts in the habits of consumer consumption and demand for goods produced, with consumers demanding greater variety of tailored products that reflect their needs and values. The Department further notes:

“In Australia, we are moving out of heavily protected production to specialised production. However, we have not yet evolved to a stage where production is geared towards more complex, high value-add manufacturing.”

Strengthening the role of Australian manufacturers in global supply chains could place Australia in international markets as a strategic partner. As global demand for high-quality Australian goods grows, this can also provide the right climate for our companies to seize export opportunities. Given a strong emphasis on manufacturing and development as instrumental to Australia’s economic growth, Radcliffe (2020) notes that an employee's intellectual ability can be treated as an asset which can be utilised by businesses to create products and services that can be sold. Further, Cameron (2020) recognises that Instead of offering welfare, paying people whose lives have been interrupted by COVID-19 to engage in job development projects not only keeps money flowing in the economy and helps small enterprises, it also avoids mental health problems. Cameron further notes that training people and boosting growth industries that will provide the sustainable jobs of the future.

3.2 Labour Market Needs

Generally, as stated by Radcliffe (2020), as the proportion of educated workers rises, the economy of a country becomes more productive as educated workers may perform tasks that involve literacy and critical thinking more effectively. The National Skills Commission (2020) identifies these as ‘core competencies’ and outlines that these are highly desired by employers. These core competencies include: Teamwork; Initiative and innovation; Planning and organising; Oral communication; Digital literacy; Reading; Writing; Problem solving; Learning; and Numeracy. Development of these core competencies not only contributes to individual’s work productivity and effectiveness, but also increases their opportunity for promotion and employer desirability.

Aside from a general economic contribution gained from increased productivity, development of specific vocational skills and knowledge allows for growth in skills shortage job roles and new and emerging job roles and skills requirements. The National Skills Commission (2020) concurs, noting that “Improved efforts on job matching and connecting job seekers with job opportunities through an increased focus on skills transferability and mid-career change will help

get people back into jobs”. Pilcher and Hurley (2020) suggest that the COVID-19 crisis has intensified labour market turn-over, and created many new career-changers in the hardest-hit parts of the economy.

Road, rail, airport and energy infrastructure programs are likely to be core components of State and Federal governments' post-pandemic fiscal stimulus packages and Cooper (2020) notes that infrastructure projects are firmly in the frame for economies trying to reboot in the midst of a recession, but policy makers should choose carefully to optimise the effect. Cooper further notes that such projects require lengthy planning phases and timeframes for rollout, and labour and raw material capacity constraints can be delayed. Cooper notes, in contrast, social housing construction work and maintenance projects will typically start quickly and are often labour-intensive. Although substantial long-term benefits for economies are driven by large infrastructure programs, policy makers seeking a more immediate boost also need to consider the rapid stimulatory effect of repair and maintenance programs.

Where governments offer these programs, significant labour is required for a range of construction and construction related tasks and micro-credentialling may be of value in a more rapid deployment of the labour needs for new entrants into the sector, or for those who need to retrain into it. In either scenario, that is of infrastructure development, or social housing development, there is an additional burden placed on training and education for the fast production of job ready labour. Further, the National Centre for Vocational Education Research's 'Apprentices and Trainees 2020 - March Quarter' shows Apprenticeship and Traineeship commencements were down 11 percent in the March quarter of 2020 when compared with the same quarter in 2019.

The Asian Development Bank (2020) recommends public-private partnerships to optimise the economic recovery impact of infrastructure projects, both large and small, because they can draw private capital and technical expertise in the infrastructure sector. Training providers could benefit in a similar manner from undertaking partnerships with employers both public and private, and both civil and building, with a view to developing program participants to undertake specific job roles with their partners and thus providing a direct pathway to employment.

Currently, there are a number of emerging such projects. As an example, Queensland has announced a A\$51.84 billion infrastructure guarantee to maintain state infrastructure investment over the next four years to 2022-2023 and has also unveiled a range of other infrastructure initiatives, including a A\$400 million Accelerated Works Program to deliver new road, bridge and pavement sealing works across the state (Cooper, 2020). Engineering Personnel (2020) note that infrastructure projects will generate 66,000 direct and indirect jobs nationally. As a further example, Cooper highlights that some major recent infrastructure investments have been made by the Victorian Government, such as a Building Works programme of A\$ 2.7 billion, which includes A\$1.18 billion for new and renovated schools, A\$ 1 billion for Aboriginal and social housing, and A\$ 328 million for road , rail and pier improvements. Works on this scale, will

provide significant labour input and present an opportunity for training providers to contribute to the development of these workers.

A priority list of infrastructure projects of more than \$72 billion in public and private investment includes Inland Rail from Melbourne to Brisbane, Marinus Link between Tasmania and Victoria, Olympic Dam extension in South Australia, Emergency town water projects in New South Wales, and Road, rail and iron ore projects in Western Australia (Engineering Personnel, 2020).

High labour demand also exists in the agricultural sector. Wyeth (2020) notes that Australians are unwilling to undertake the agricultural work to get food to market and it is very difficult for the sector to find a consistent stream of competent agricultural labour. These issues are compounded by restrictions on movement to and within Australia, resulting from COVID-19 control measures, generating a skills shortage that in turn will need to be addressed through significant development of labour. Australia need to look for more opportunities to enable the farming industry to fulfil its labour needs. The training sector can contribute in this regard with the production of job ready labour in the sector.

Toward the objective of addressing some of the skills requirements currently emerging and economic recovery, the Morrison Government is set to invest and support skills development through a \$2 billion JobTrainer package. Australasian Mining Review (2020) outline that the package will assist with Australia's resources and energy employers to lead the economic recovery from the COVID-19 health pandemic. Harcourt (2020) notes that the JobTrainer program will give school leavers the experience, confidence and aptitude necessary for economic recovery post-coronavirus through the creation of training places in manufacturing, healthcare and trades. The package provides for 100,000 extra apprentices and A\$500 million to train or re-skill 340,000 school leavers and people unemployed.

The government of the Commonwealth will subsidise the salaries of currently working apprentices and trainees. The subsidy covers half of the wages of an apprentice, up to \$7000 a quarter for workers working on 1 July 2020. This adds to the stimulus already given to employers to keep trainees and apprentices on. These programs demonstrate government commitment to growth of trade and technical training and the recognition by Australian government that technical and trade training are central to Australia's economic recovery.

The Commonwealth Government has also announced the creation of a National Skills Commission (NSC) to make recommendations on the kinds of employment that will be needed in the future. The NSC will set "target areas" in every state with the potential for future job development, including healthcare, transport, postal and warehousing, manufacturing, retail trade and wholesale trades (Harcourt, 2020). These target areas provide a focal point for training providers to concentrate their training and delivery strategies and products. Harcourt (2020) refers to these incentives as the 'learning economy' and believes that they will facilitate upskilling and getting ready for a post-COVID-19 recovery.

The hardest-hit demographics by the pandemic have been younger people working in part-time and seasonal jobs in the hospitality, arts, leisure and retail industries, with the June unemployment rate hitting up to 14 percent for 15-19 year-olds and 12 percent for 20-24 year-olds (Cameron, 2020). Cameron also refers to Global market analysis that estimates that while job losses for women have been greater due to COVID-19, men have lost more income. Sustainable employment in the longer term would rely on the help of wealth-generating industries in new and developing sectors. It will be important for Australia to concentrate on supporting companies that can quickly increase jobs when the JobKeeper program ends. Cameron (2020) suggests that, through short-term job development programmes, anticipated post-JobKeeper job losses can be mitigated with an emphasis on youth, women and older employees who could never work again without assistance. To this objective, the Federal Budget includes \$240 million in measures to support new cadetships and apprenticeships for women in science, technology, engineering and mathematics, as well as to support women's safety at work and home, and promote job creation and entrepreneurialism (Create Digital, 2020).

3.3 Implications of the Cobweb Model

In order to illustrate the consequences of workers acquiring new skills, Radcliffe (2020) refers to the Cobweb Model. Cobweb models describe unusual price and quantity variations that may occur in certain markets. When workers learn a new skill, the model shows how wages fluctuate, but also how the availability of employees is influenced over time. The model shows that when workers develop a new skill, in the short term, higher wages occur. In any occupation, the higher the wage, the more people are willing to work in it, so the supply curve is upward sloping (National Academy of Engineering, 2018). However, as more employees are educated over time and join the workforce to seek higher wages, there is a rise in the availability of trained workers. Eventually, because of an excess supply of jobs, the consequence is lower wages. When salaries decline, fewer employees are interested in those jobs, contributing to a decrease in the availability of staff. The cycle starts again with training more staff and, in the short term, rising their salaries.

Since training and education take time to complete, in the long and short term, increases in demand for certain types of workers have different impacts. In the short term, the rise in demand for better-trained jobs results in an increase in salaries and as availability increases there is a downward pressure on the wage rate as the supply of new jobs rises. Availability results from increased interest in particular job roles due to the potential of attaining a higher salary. This increased interest leads to greater participation in training to gain the skills and knowledge required to secure a role in the higher salary job.

Over time, the increased interest leads to an over-supply of available qualified labour which results in lower demand. Further, the National Academy of Engineering (2018) notes the higher the salary, the less employers are able to recruit staff, so the demand curve is sloping downwards. This lower demand then leads to offers of lower salaries, eventually leading to a decline in the particular job role. The decline in interest leads to decreased participation in the relevant training. There is less participant interest in developing skills required by employers

because of the dropping pay rate. As a consequence, wages increase, although in smaller and smaller increments. This period of rises in wages and rises in labour persists until it has reached a balance whereby the initial upward change in demand matches the long-run supply of labour.

The intersection of demand and supply curves defines pay and job levels. The market reacts when there are changes in demand or supply, known as shocks (National Academy of Engineering, 2018). These shocks are relevant to training provider delivery strategies and resource allocation. For viability, training providers need to be aware of this cycle such that their training and assessment strategies can be adapted to ensure delivery matches demand. Enrolment adjustments for changes in the labour market are not always smooth or rapid, especially in highly technical fields. The inability to react quickly to changed market conditions may cause highly technical employees to experience boom-and-bust cycles in the market. There are a number of job roles and industries, particularly as identified by the National Skills Commission, that will experience significant training uptake initially, in line with the model. Given the promotion of particular skills gaps and shortages and provision of government funding encouraging specific training development, many workers will be produced over a short period of time where they are most needed. However, as per the Cobweb model applied by Radcliffe (2020), the labour market could result in over-supply leading to subsequent declines.

3.4 Training Program Delivery

Litow (2020) posits that innovative methods are required to empower adult workers and students with the education and skills that are now more essential in an economic downturn to increase the pace of a vibrant and robust post-pandemic economy. A shift towards online education, skills-based training, and accessible qualifications that take weeks or months to accomplish, rather than years, is increasing due to the social and economic disruption caused by COVID-19 (ICEF Monitor, 2020). Even after the pandemic is managed, non-traditional education will be a growing field of economic activity, with ICEF Monitor (2020) forecasting that short-term certificates will grow above 10 percent of their overall enrolment in 2019. This notion aligns with the labour market needing relevant skills sets quickly, rather than more generic qualifications, to meet growing labour market demands and specific job role skills shortages. ICEF Monitor (2020) further refers to a survey conducted in 2019 by Pearson of more than 11,000 learners in 19 countries. The survey noted that 68 percent agreed that a degree or certificate from a vocational college or trade school was more likely to result in a good job with career prospects than a university degree.

The Pearson Survey also found that Among working respondents who had opted for further education, many more than had undertaken upskilling from a college or university had selected self-training / teaching themselves through Internet resources or taken courses offered by employers or professional associations. Those in workplace setting thus recognise the value and benefit in gaining specific targeted skills related to their role or tasks performed. In August 2020, Pearson repeated the survey, and since 2019, interest and participation in alternative education has been high (ICEF Monitor, 2020).

ICEF Monitor (2020) posits the possibility that college degrees will shift further into the luxury goods category for certain students and families in this period of disruption, leaving enough space for alternatives to enter the mainstream, such as online qualifications, business certifications, and micro-credentials. Assisting large numbers unemployed adults, who will not be able to return to their former employment, is the most urgent concern (Litow, 2020). They need job training based on the unique skills and education required to obtain employment, mostly technology-oriented, but including problem solving and teamwork, along with the ability to earn a competitive certification or two-year degree, opening the door to new career opportunities.

These approaches in delivery and product offerings by training providers offer a number of advantages including affordability, relevancy, stackability and flexible scheduling (ICEF Monitor, 2020). Each of these factors is critical in times of such disruption as has been experienced in response to the COVID-19 pandemic. Many workers have lost their jobs as a result of the pandemic and on this basis affordability may be a critical factor in choosing to undertake training. Likewise, relevancy is of significance as job outcomes are essential, both for the participant and for economic growth. Stackability allows for several certificates to be undertaken and completed over time which eventually lead to a more valuable specialisation. These can be aligned to job progression, particularly in a partnership arrangement with an employer. Flexibility is a must for the multitudes juggling education, work, family, and sometimes illness or caregiving during the pandemic. Crawford (2020) illuminates that students, both new and current, could be juggling parenting and work with their studies, as well as becoming home school teachers and dealing with the conditions that are overwhelming and anxiety-provoking. Training programs offered by training providers in both VET and the higher education sector must accommodate these sudden and new environmental conditions.

The Australian Industry and Skills Committee identifies a number of priority skills its IRC Skills Forecasts, including: Occupation and industry-specific skills; Cross-industry skills and trades; Industry knowledge; and Understanding and use of technology and equipment (Australian Industry and Skills Committee, 2020). Cross-industry skills and trades refers to specific technical skills that are important across different industries and includes electrical skills, health and safety, maintenance and servicing, and testing and diagnostics. Short course programs are needed in these areas that will quickly allow participants to gain skills required to adapt to, and undertake new or different job roles either with their current employer or in new opportunities. Likewise, these skills should be heavily integrated into existing trade and skills course offerings to facilitate maximum job opportunity outcomes.

A number of industries requiring industry specific knowledge as a priority were also noted by the Australian Industry and Skills Committee. These areas include: Aerospace; Arts, Culture, Entertainment and Design; Automotive; Aviation; Business Services; Education, Information and Communications Technology; Laboratory Operations; Printing and Graphic Arts; and Rail. Each of these areas require additional training effort to meet the current needs. Flexible approaches should be considered, such as noted by ICEF Monitor (2020), to provide training services that are accessible to the cohorts requiring them. Radcliffe (2020) advocates the notion

of specific training focus, noting that although an economy is unlikely to have a competitive edge in all sectors, it may concentrate on a variety of industries in which qualified professionals are more readily trained.

3.5 Implications for Training Providers

To encourage participation in training activities, learners must have adequate support, which can include paid internships, mentoring, and community service, as part of the training experience, giving them the ability to reinforce workplace skills. Training providers can work with businesses to engage their employees as mentors to students and provide more paid internships. Further, during the pandemic, many of these internships can be virtual (Litow, 2020). It could also mean developing creative and innovative activities such as 'live work' on virtual campus worksites where it is difficult to find business partners (Pilcher and Hurley, 2020).

Training programs should address practical skills like problem-solving and critical thinking and in order to succeed in work, some students may need to develop additional skills alongside the key competencies of their course (Pilcher and Hurley, 2020). This may include improved literacy, numeracy and digital skills, or the ability to communicate and collaborate effectively in a workplace, or any of the core competencies identified by the National Skills Commission (2020). In this way, career opportunities are maximised for participants in the VET sector.

The VET sector plays a critical role in maintaining social and economical equity and inclusivity. Pilcher and Hurley (2020) suggest that in Australia, vulnerable communities, already at risk of being left behind in an economy that needs higher levels of skills and education, are now still in a recession. VET performs a broad social role in preparing students for the workforce promoting involvement and economic participation, especially for marginalised groups or disengaged post-school learners (Pilcher and Hurley, 2020). Young Australians at the greatest risk of slipping through the cracks in the crucial 'school-to-adulthood' transition need to be given special attention by training providers. Pilcher and Hurley (2020, p 16) quantify:

"Recent Mitchell Institute analysis of the impact of COVID-19 on apprentices and trainees forecasts the number of school leavers classified as NEET (not in education, employment or training) is estimated to increase by approximately 50 per cent to over 10 per cent of school leavers, due to reduced access to these training opportunities. More broadly, youth unemployment is rising more sharply than unemployment overall. In June 2020 the youth unemployment rate increased 0.4 percentage points, rising to 16.4per cent".

Pilcher and Hurley (2020) suggest that this implies the need for more flexible modes of delivery that better fit the needs of those who juggle training with work or family commitments, particularly for older learners or those who are up-skilling after a job loss or career change.

Training providers also need to become experts in navigating the myriad of funding options available in the VET sector in order to capitalise on the opportunities available. In Australia, In the Australian VET market, there are over 2,400 qualifications and each may have several different types of electives or requirements, meaning it can be difficult to establish one course funding amount (Pilcher and Hurley, 2020). Each state and territory sets its own funding rates

and maximum amounts for income contingent loans are set by the federal government as well. Adding to the complexity of VET funding, depending on whether a course program is an Apprenticeship/traineeship, government funded, full fee or Recognition of Prior Learning (RPL), the same course can have different funding rates. There are also five types of student loadings that can be applied to the funding whereby regional students, Indigenous students, students with a concession card, young people and retrenched workers can all receive different loadings. Pilcher and Hurley (2020) note that the result is that there are at least a possible 430,000 permutations of VET funding.

As noted in the Mitchell Report (Pilcher and Hurley, 2020, p26), Australia “needs a training system that provides the skills that power the Australian economy, but which also improves the lives of the most vulnerable learners”, in order to meet its economic recovery objectives.

4. Conclusion

Government needs to ensure through legislation and jobs programs that access to education and training is available and a range of funding models are available to ensure that high levels of participation can occur. Training providers are key to Australia’s economic recovery and future growth. Training providers, in order to effectively contribute to the development of the required labour, need to promote training and actively recruit participants in partnership and collaboration with sector employers. Training provider products must also be adapted to offer programs suited to the current COVID-19 economical recovery needs including combining certificates, short courses and micro-credentialling and utilisation of high access platforms such as online courses and these should be applied all the way up to degrees. Training delivery and assessment strategies must be planned and implemented to allow for cyclic enrolment variations as supply and demand equilibriums are reached over time.

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