'No Frills' discussion paper

VET'S ROLE IN TRANSFORMING THE FUTURE

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INTRODUCTION

'Transforming the future' can have different connotations in different contexts, but here we focus on the way in which the vocational education and training (VET) sector is adapting, anticipating and activating change in response to future skill demands. We also explore how the sector assists learners to skill, upskill and reskill, which in turn actively contributes to the Australian economy. Without a doubt, the past few years have been both difficult and unpredictable for many, with the ongoing COVID-19 pandemic and other natural disasters such as bushfires and floods. This paper therefore also considers how the VET system has been able to adapt to these unforeseen events and what can be learnt from these responses and adapted for the future.

'VET's role in transforming the future' is the theme for the 31st National Vocational Education and Training Research Conference, 'No Frills'.

Presenters to the conference have been asked to consider how VET can continue to support Australia's economic recovery from the COVID-19 pandemic and respond to the country's shifting future skill demands, by exploring issues such as delivering future skills now, innovative RTO-industry partnerships and empowering disadvantaged learners, among many others.

The theme for 2022 builds upon last year's theme of the 'past informing the future' (Waugh 2021) to investigate what we can do now to ensure that the sector continues to play a role in transforming the future.

VET SYSTEM ADAPTABILITY

One way in which VET plays a role in transforming the future is by having the capacity to adapt to the changing needs of industry and to evolving skill needs. This means being aware of current skills and anticipating future skill needs, having the ability to update and modify qualifications in a timely manner, and working with industry by means of partnerships.

Forecasting future skill needs

For VET, an important aspect of being able to train the future workforce is having an understanding of both evolving and declining skills. But how is this currently done? The National Skills Commission (NSC) plays a vital role in identifying the jobs and skills that will be in demand in the coming years. Through its *The state of Australia's skills 2021: now and into the future report* and *Skill priority list 2021*, the NSC highlights the number of growing jobs and the emerging skills. It also identifies current labour market demand and future demand indicators for all occupations at the 6-digit ANZSCO level over a five-year period (National Skills Commission 2021a, 2021b). Given the strong ties between vocational education and industry, this information can be used to guide updates to training packages, for example, revisions to qualifications and new units of competency. It is worth noting that the NSC has also created the *Australian Skills Classification*, which identifies specialist tasks, technology tools (i.e. software) and core competencies for all occupations. To help in identifying occupations where there may be skill transferability, the commission has also established skills clusters and skills cluster families (National Skills Commission 2022). The classification looks at skills independently of occupations and offers an alternative basis for forecasting future skills.

While the National Skills Commission is a relatively new body and is involved in making these predictions at a national level, it should be acknowledged that state and territory governments have been doing this for many years through their own skills and priority occupation lists. Examples of these are the NT's Skilled Occupation Priority List; NSW's Smart and Skilled NSW Skills List; Victoria's Jobs and Training Needs Reports; and WA's State Priority Occupation List. The process of compiling these lists involves intensive consultation with businesses and peak industry bodies, as well as community input and labour market analysis (Department of Industry, Tourism and Trade 2021; Department of Training and Workforce Development 2021). Most of these lists are also based on ANZSCO occupation codes and are updated annually. This local forecasting is an important complement to national forecasting, as it can recognise and focus on regional differences and needs. The local lists also feed into subsidies for training and areas for skilled migration.

Changes to the labour market, including in the nature and mix of skills, will continue to evolve in ways that are difficult to predict with certainty. It will be critical for the VET sector to harness the power of big data and to apply ever more sophisticated analytical techniques to improve our understanding of the future skills and capability requirements of the workforce. This in turn will inform the policy and delivery response needed to ensure that Australia has the right skills at the right time.

Qualification development and design

The Commonwealth Government and state and territory governments are currently working to streamline the qualification development process and the design of qualifications. The impetus for this is to ensure that qualifications can be more quickly updated to respond to changing industry and skill needs, a problem area in the past for the VET system. The process for developing a qualification and then having it ready to be delivered by a registered training organisation (RTO) can take anywhere between two and seven years (Wibrow & Waugh 2021), meaning that some qualifications are already out of date by the time they are being taught and

before the students graduate (Misko & Wibrow 2020). The other issue is the large number of available qualifications with little or no use (Korbel & Misko 2016). So what is being done to fix this?

As agreed by Skills Ministers, 'industry clusters' are being introduced by the Commonwealth Government to provide 'stronger industry leadership and engagement' in the VET system through workforce planning; training product development; implementation, promotion and monitoring; and industry stewardship (Department of Education, Skills and Employment 2021a). The proposed nine industry clusters, with the final number and composition of each cluster to be settled through the grants round, are:

- Agribusiness and food production
- Early educators, health and human services
- Manufacturing, print and textiles
- Arts and personal services
- Finance, technology and business
- Mining, resources and energy
- Building, construction and property
- Government, education and public
- Wholesale, retail, transport and logistics (Department of Education, Skills and Employment 2021b).

Industry clusters are planned to be fully operational from January 2023, and will replace the current 67 industry reference committees (IRCs), six skills services organisations and three skills organisation pilots, thus reducing the number of bodies involved in these functions (Department of Education, Skills and Employment 2021b). While the focus is heavily on industry engagement, individuals with technical expertise, stakeholders across the VET system, higher education and employers will be included in sub-committees dealing with training product and delivery (Department of Education, Skills and Employment 2021b). Through their membership of the sub-committees, VET educators and RTOs — those who deliver the training — will be able to inform the process and advise what is trainable.

While the three skills organisation pilots in mining, digital and human services will eventually be superseded by the industry clusters, they are currently undertaking qualification trials to support:

- 'the development of qualifications that recognise common skills, deliver broader vocational outcomes and promote individual mobility and labour market resilience
- a reduction in unnecessary training product duplication
- a reduction in training product complexity
- an enhanced relationship between training products, training needs and employment pathways
- greater training product flexibility and enhanced responsiveness to changing industry need
- improved articulation and pathways between education sectors' (Department of Education, Skills and Employment 2021c).

Lessons can be learnt from the international VET systems that have already taken this route, whereby their occupational standards and their qualification standards have been made

separate, for example, South Africa and England (Wibrow & Waugh 2021). Differentiating the two will complement the industry cluster model by allowing the alignment of qualifications to groups of similar occupations rather than to a specific occupation.

Furthermore, it was announced in March 2022 that, from 2023, the Australian Skills Quality Authority (ASQA) — the national VET regulator — will be taking on the role of reviewing and recommending training packages, rather than this task being undertaken by an industry-led body (ASQA 2022). Previously, the regulator had little or no involvement in the training package development process, in contrast to international processes, where regulators quite often have final approval (Wibrow & Waugh 2021). It will be interesting to see whether this change assists in introducing some efficiencies to the development and approval process.

These changes to qualifications are welcomed albeit that some in the sector would say are long overdue. Organising qualifications around grouped occupations to improve the connection between qualifications and jobs, enhance career mobility, allow experimentation within an occupation group before specialising and enable workers to adjust to changing circumstances is not a new concept in Australian VET research, particularly over the past decade; for examples see Wheelahan, Buchanan and Yu (2015) and Snell, Gekara and Gatt (2015) (also cited in Wibrow & Waugh 2020). Time will tell whether they can meet their goals and truly allow for a more streamlined approach to qualification development.

RTO-industry partnerships in response to Industry 4.0

Undeniably, Industry 4.0 and the use of new and advanced technologies in the workplace are well and truly upon us, but the VET sector has a vital role to play in ensuring that current and future workforces are equipped with the skills needed to use this technology effectively. Digital skills are not only concerned with using technology but also about being able to operate in a digital work environment (NCVER 2020a). Options for the VET sector moving forward include the development of specific units of competency, skills sets or short courses dealing with digital skills to allow the current workforce to upskill. In addition, digital skills can be incorporated into foundation skills, to ensure that they receive the same attention as language, literacy and numeracy (LLN) from now on to guarantee that the future workforce has the necessary digital skills (NCVER 2020a). However, the current lag in updates to training package qualifications noted above means that vocational training does not always meet the needs of employers in fast-growing areas and those subject to advances in technology — the technology can change while the student is undertaking their training (Wibrow, Circelli & Korbel 2020). Furthermore, with

the rapid pace and ongoing nature of these technological changes, RTOs may find it impossible to have easy and ongoing access to the latest equipment and technology, especially due to the expense associated with it. This is where partnerships with industry can complement VET delivery (see Box 1 below for some examples).

Industry can be involved with RTOs in various ways; for example, they can help in the design of course content, offer workplace experience or work-integrated learning opportunities, as well as ensure that simulations during study are relevant and representative of best practice (NCVER 2020a). These partnerships, particularly with businesses at the forefront of cutting-edge technology, will give all students the opportunity to learn the most advanced and up-to-date skills. They will also enable students to gain experience using innovative technologies, meaning that they may have the capacity to introduce newer practices into less technologically advanced workplaces following their training (NCVER 2020a). Additionally, these partnerships allow for enhanced collaboration in adapting and delivering national training products to more effectively meet workforce needs (Bowman & Callan 2021). Through these partnerships, the VET sector demonstrates yet another way in which it contributes to transforming the future.

Box 1: Examples of RTO-industry partnerships related to technological advances

The WA Government, South Metropolitan TAFE and Rio Tinto partnered to develop qualifications and skill sets in automation. While the development of these courses was funded by Rio Tinto, the course content can subsequently be customised to suit other employers as necessary (NCVER 2020a).

Federation TAFE is working with large wind industry corporations to build an Asia Pacific Renewable Energy Training Centre to support the growth of wind farms and battery storage in the area and the transition from coal-fired power generation (Federation University Australia 2022).

TAFE Queensland, in partnership with Apple, is offering iOS app development with Swift. Co-created with Apple engineers, the course will teach students fundamental app development skills (Apple Newsroom 2021).

TAFE NSW is partnering with Microsoft, Macquarie University and the University of Technology Sydney (UTS) to pilot a new digital learning institute. It will build upon TAFE NSW's current cyber security offerings with a range of training programs created by Microsoft, UTS, and Macquarie University. The learning institute will also develop pathways to further learning (Kwan 2021).

VET'S ROLE IN SKILLING AUSTRALIANS

The VET sector plays a pivotal role in skilling individuals. It provides young people with initial qualifications to enable them to enter the workforce; it reskills people who are changing careers; it provides a pathway to higher education; it upskills individuals to allow them to progress in their careers; and, along with technical skills, it helps to build soft skills that can be transferred to different occupations, such as communication, teamwork and, more recently, digital skills and adaptability. It is estimated that 21.7% of the Australian resident population aged 15 to 64 years participated in nationally recognised VET during 2020 (NCVER 2021). That means one in five Australians are engaged in the VET sector over the course of a year, potentially transforming their futures, as well as enabling them to contribute to the economy.

What this shows is that VET can fulfil many different learning needs for individuals, as well as being an avenue for lifelong learning. Secondary school students are given the opportunity to undertake VET as part of their Senior Secondary Certificate of Education (SSCE) and, in most jurisdictions, it will contribute to their Australian Tertiary Admission Rank (ATAR) (Misko, Lees & Chew 2021). But VET at school can also lead directly to an apprenticeship or full-time and ongoing employment if a suitable VET course is chosen (Misko, Chew & Korbel 2020). For those looking to change careers or are being forced to change fields due to the closure of certain industries (for example, car manufacturing and changes to forestry), VET offers a way to reskill and transition into other areas (Wibrow & Circelli 2016). Looking at the existing soft or transferable skills of individuals, such as communication and team work, and generic technical skills, for example, knowledge of workplace health and safety, can also help with transitions (Wibrow & Circelli 2016). VET also provides an avenue for articulation into higher education, with students being able to use their VET study to gain entry into university. In this context, it should be noted that, conversely, some university graduates go on to undertake further VET study too (Gonski & Shergold 2021). The new industry cluster arrangements will potentially improve the recognition of skills across occupations and further enhance the ability of Australians to gain recognition of their current skills when reskilling or upskilling, changing careers or articulating to the higher education sector.

Furthermore, VET is a vital pathway for those who leave school without completing Year 12. Around 75% of early school leavers re-engage with education by the age of 25 — 51% of these through apprenticeships and traineeships and a further 34% through other VET courses (Lim 2022). This aspect of VET further highlights its role in transforming the future of individuals.

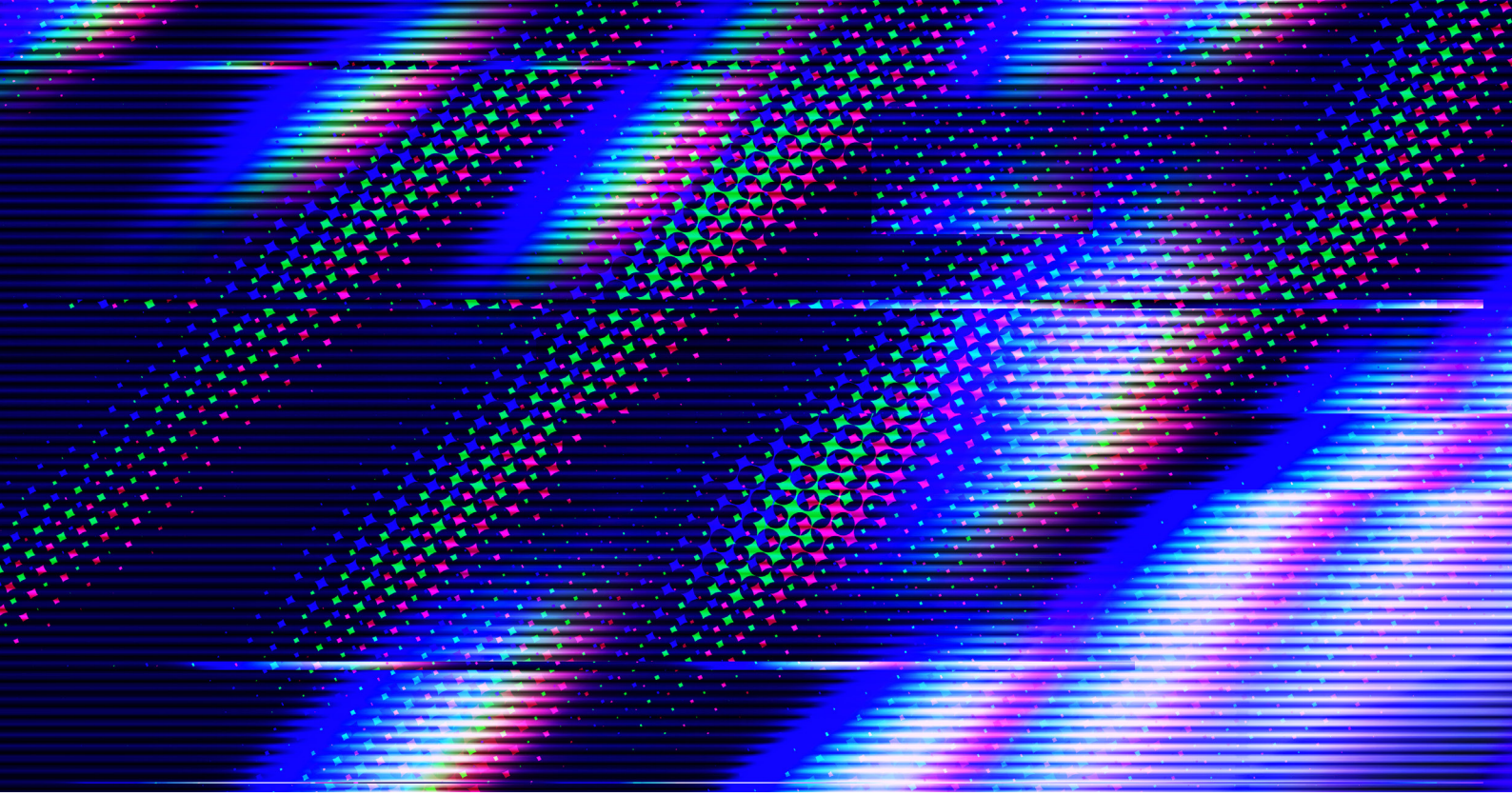
VET'S ABILITY TO ADAPT TO UNPREDICTABLE EVENTS

The past few years have undoubtedly presented us with unprecedented challenges, by way of natural disasters, such as bushfires and floods, and the global COVID-19 pandemic, instantly upending the way Australians live and work. The responsiveness of the VET sector in demonstrating its ability to continue to offer training and also to deliver the skills that were urgently required across many sectors, such as infection control and hygiene training, played a crucial part in keeping the economy going. These events also facilitated the rapid uptake of online delivery and short courses, such as micro-credentials and skill sets, offering further confirmation of VET's role in transforming the future.

Switch to online delivery

In response to the COVID-19 pandemic and the introduction of measures such as social distancing and lockdowns, around three-quarters of RTOs transferred at least some of their training online, with a majority (61.8%) subsequently confirming that they are likely to use more blended delivery modes in the future (Hume & Griffin 2022). While this move indicated to RTOs that certain units, courses or parts thereof are suitable for online delivery, it also flagged that some students face more challenges in this environment; for example, mature-aged students, who have low confidence with technology, or students with learning comprehension difficulties. RTOs, policy-makers and regulators need to balance any long-term changes to delivery modes with the potential impacts on these student outcomes (Hume & Griffin 2022).

With blended delivery likely to become more commonplace for RTOs, time should be invested in ensuring that these offerings are being delivered via the most appropriate means and are well planned and considered to ensure that high quality is maintained. Box 2 provides some recommendations.



Box 2: Insights for delivering VET online

Deniese Cox, an online learning expert, recommends the following should be considered by RTOs and VET practitioners delivering VET online:

- Draw on a combination of both instructional content, such as text-based and multimedia resources, and participatory learning opportunities that encourage student engagement.
- Draw on a combination of both real-time and non-real-time delivery.
- There is no 'one size fits all' model as the content needs to be adapted to factors such as class size, the subject and student needs.
- Technology should support good online education, not drive it.
- Structure and clarity are key to ensuring that students can navigate their way through learning content.
- Not all content is essential for all learners and this should be communicated to students so they know what is essential and what is supplementary.
- Adapt content and training approaches for the online environment and do not attempt to replicate in-person classes.
- Live online sessions should be used to convey information that is difficult to understand through other mediums, and to allow students to receive real-time support, answer questions or work with other students.
- Shorter video content is more beneficial than long videos as students like to revisit content.
- Create opportunities for students to develop relationships with their peers and to feel part of a learning community.
- Educators should provide a thoughtful introduction, one that demonstrates their teaching style to enable students to feel familiar with the person leading their learning journey.
- Educator training around teaching online should focus on both how to use a tool and why using it in a specific way is good practice (Cox 2022).

Rise of short courses, skill sets and micro-credentials

Traditionally, non-nationally recognised training, particularly short courses and micro-credentials, have been favoured in the workplace in instances where employers seek to increase their employees' skills; for example, for business-specific purposes such as learning about new equipment, leadership training and other customised initiatives (Bowman & Callan 2021; O'Dwyer 2021). However, as the country has navigated its way through the COVID-19 pandemic, the demand for shorter forms of training, such as skill sets in infection control and hygiene training, has increased in parallel. By utilising existing units of competency to create skill sets that respond to an immediate need, VET has been able to tap into this market. The resultant skill sets were fast-tracked for approval by AISC's Emergency Response Sub-Committee (AISC 2021). The VET sector's capability in this area has not gone unnoticed by businesses, with employers now more frequently contacting their industry associations and RTOs for assistance with training (Bowman & Callan 2021). The VET sector needs to capitalise on this shift in thinking.

The viability of the VET sector into the future will rely, in part, on its ability to respond rapidly to changing skill needs; to facilitate upskilling and reskilling; and to contribute to lifelong learning. These requirements represent scenarios where a full qualification is not necessary but where, perhaps, a few subjects could suffice. The growing importance of these shorter courses, or micro-credentials, has been nationally recognised, with a 'National Framework for Microcredentials' recently released. The framework provides a national definition for micro-credentials and outlines a minimum standard for them (Department of Education, Skills and Employment 2021d). At the moment a great deal of training is occurring within the VET sector which could be considered micro-credentials, specifically enrolments in 'subject bundles', which are enrolments in subjects not part of a nationally recognised program. This training is mainly related to regulation and skills maintenance and is generally funded on a fee-for-service basis (Palmer 2021). Palmer (2021) found that 2.6 million students were enrolled in these subject bundles in 2019, compared with 76 565 students in training package skill sets and 93 555 in accredited courses. As part of its role in transforming the future, the VET sector could extend these offerings further and create bundles related to emerging skill needs. These could then be used by learners to build on and supplement their qualifications, whether obtained through the VET system or higher education.

FLOW-ON IMPACTS

Any discussion about VET's ability to be adaptable and play a role in transforming the future should not ignore mention of the impact of developments on the educator workforce, as well as any implications for the quality of VET.

VET educator workforce

The changes occurring in the VET sector described above — the take-up of industry clusters, the move to online delivery, and the introduction of more transferable skills such as communication, digital skills and adaptability alongside technical skills across most courses — have flow-on effects for the VET educator workforce. The VET educator workforce itself will need the knowledge and skills to accommodate these changes, which include teaching new skills, while simultaneously maintaining their industry currency. This presents a formidable task. Combined with this, there is a shortage of VET educators, exacerbated by a level of remuneration that is often below that of industry, a lack of career pathways and a high degree of casual employment

arrangements (Tyler & Dymock 2021). To guarantee that VET educators can meet these future demands, two issues need to be addressed: firstly, how to ensure that educators are equipped with the appropriate skills and knowledge to teach the requirements beyond the technical skills, and, secondly, how to attract more industry experts to become VET educators to safeguard future supply.

While many VET educators hold a Certificate IV in Training and Assessment (TAE) qualification, some argue that the qualification is focused too heavily on VET processes and procedures and needs more emphasis on key pedagogical theories, principles of learning and assessment, and teaching practice (Tyler & Dymock 2021; Misko, Guthrie & Waters 2021). A cursory analysis of the units of competency in the TAE indicates that topics on teaching with technology or online could be converted into core units rather than remaining as electives. In addition, topics relating to the incorporation of transferable skills into teaching — how to teach and assess them when it is not necessarily an educator's area of expertise — should also be included. These skills extend beyond the foundation skills currently included in the training package qualification. Furthermore, improving the digital skills of educators should be a priority, since future students are likely to have greater levels of digital skills than previously and will also expect educators to use digital technologies to create an engaging and flexible learning experience (NCVER 2020b). These changes are crucial, given the direction in which the sector is moving, with the introduction of industry clusters and the increased use of online delivery by RTOs.

To overcome the current shortage of VET educators and improve future supply, more should be done to encourage industry experts into the VET sector. Currently, the TAE is seen as a barrier to the recruitment of more industry experts (Tyler & Dymock 2021). To address this, industry experts should be encouraged and supported to contribute their knowledge in small, supervised scenarios, such as presenting as an expert on a particular method or technology — testing the waters, before committing to a teaching qualification. Options should also be available to them to do some teaching while working towards the qualification (Tyler & Dymock 2021). On a similar note, dual professionals who teach in VET at the same time as working in industry should be further encouraged (Tyler & Dymock 2021). Encouraging dual professionals will help to ensure that VET practitioners retain current industry knowledge, which will benefit their students, and will also suit the casualised nature of the VET educator workforce. However, we need to ask the question: is essentially working two jobs practical in the long-term or should it be seen as more of a transitional pathway into VET teaching?

Quality

For the VET sector to continue to contribute to transforming the future, RTOs need some flexibility in being innovative in their offerings and delivery. That said, the current focus on compliance with regulations, standards and contractual requirements means that attention is diverted away from improving the quality of delivery (Guthrie & Waters 2022). Reducing the burden of compliance for RTOs and moving towards a culture of continuous improvement is needed. ASQA's current progress towards a model of self-assurance, whereby RTOs who can demonstrate an effective ability to self-assure and continuously improve will be rewarded with reduced regulatory intervention, is a step in the right direction (ASQA 2021; Beddie 2021). This will hopefully afford RTOs more time to focus on improving course content and delivery.

Another consideration for quality is whether competency-based training (CBT) should remain the main training approach for all VET qualifications in Australia, irrespective of their Australian Qualification Framework (AQF) level. Competency-based training is often seen as the minimum standard for achievement, but what encourages a learner to aspire above this? Hodge (2018) outlines the benefits and criticisms of this system of curriculum and finds that competency-based

training is too narrow for the complex jobs of today. Furthermore, Misko (forthcoming) suggests that, while a competency-based training approach is sufficient for entry- and mid-level VET qualifications, another approach, such as a skills-based training approach, should be adapted for higher-level VET qualifications. A method such as this could provide a more holistic view of achievement rather than the current fragmented approach of units of competency (Hodge 2018). As the VET sector transitions to industry clusters and qualification trials are being undertaken, the time is ripe for exploring the possibility of making changes to the training and assessment approach.

FINAL THOUGHTS

The steps that are being taken today, such as introducing industry clusters, streamlining the qualification development process and transitioning to self-assurance of RTOs, will go some way to ensuring that VET continues to play a role in 'transforming the future'. Taking advantage of the current trend towards micro-credentials by creating more subject bundles or skill sets that deal with emerging skill needs will assist VET to remain relevant to employers and contribute to the lifelong learning of Australians. Work being done now, during the current transition to online delivery as a consequence of the pandemic, should be consolidated, with investment in both upskilling the digital skills in and knowledge of the online teaching practices of educators and in suitable future systems for online delivery. Online delivery is likely to become a more important mode of delivery, given the digital savviness of the new generations of learners. Additionally, in the wake of the events of the past two or so years, disaster management should also be considered in the design and delivery of VET qualifications to ensure that any disruptions to learning are minimal. These measures will help to safeguard VET's ability to be adaptive to skill needs and unpredictable events, as well as help individuals themselves to be adaptive into the future and continue to support the economy.

Attendees of the No Frills conference will have a chance to contemplate these themes further as they engage in presentations on lifelong learning (Sarojni Choy); pathways from VET courses (Damian Oliver); delivery of VET online (Deniese Cox and Sheila Hume); delivering high-quality VET (Hugh Guthrie with Melinda Waters); and changes to VET teaching following COVID (Erica Smith), along with many more highly relevant topics. The conference is an opportunity to ponder and reflect on the various roles that the VET sector plays in transforming the future.

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