



Reimagining Vocational Qualifications

Introduction

It could be contended that skills have never been so important, yet simultaneously our vocational education and training system seems poorly placed to respond to this need. Skill shortages loom large across the Australian economy. Seventy-five percent of employers already report being negatively impacted by skill shortages, most acutely within trades, technicians and paraprofessional occupations¹. And work continues to transform. By 2025, 27% of current jobs will disappear and 49% of jobs will be reshaped and require major reskilling efforts. By 2030, 22% of the workforce will be in a job not existing today.² Skill gaps, an issue that is becoming more and more prevalent amongst our employed, underemployed and unemployed working age population, are a deeper more troubling problem, especially as the shelf life of skills radically reduces. Yet in excess of 45% of jobs of the future will require support from vocationally oriented qualifications.³ The need for a major and continual boost to our skilling effort is both clear and compelling, and there is a unique opportunity before us to re-consider and re-design our vocationally oriented qualifications to meet this challenge.

Here we are at the beginning of 2020. It is time to question whether the previous assumptions underpinning vocational qualifications for Australia are still valid. Much has changed since the development of national curriculum in the 1980s and then the implementation of Training Packages in 1996. While the world of work has changed dramatically, individuals entering work have correspondingly different expectations, needs and potentially a complex, multifaceted journey to navigate. When the existing qualifications architecture was designed the internet was in its infancy, email yet to be deployed, smart phones unimagined and digitisation was in the realm of science fiction. The skills and capabilities required to enter and stay in the workforce in the 2020s and beyond are different than in the 1990s. While some skills remain constant, many new ones have been added and the balance has shifted and continues to shift. No longer are we developing qualifications for a world where your entry qualification is designed set you up for the remainder of your working life.

The VET sector has largely been well served by its vocational qualifications over history. The qualifications have been competency-based, linked to a specific occupation directly aligned to the Australian Qualifications Framework (AQF). The structural framework in which each qualification sits is Training Packages. Training Packages comprise units of competency that are then assembled into qualifications, with the packaging rules being the road map to the approved job-aligned outcome. Training packages have been developed and endorsed in conjunction with industry. In theory qualifications can be assembled flexibly and customised according to need. However, the application of the training package model has not always delivered on the promise of the design of the Training Package model.

Australia, when embarking upon Competency-Based Training (CBT) as the national approach to curriculum development, adopted a model from the UK. The UK model was narrow in its scope: a functional competency approach.⁴ This functional approach described work tasks and had performance-based observation at its core. Other approaches were implemented elsewhere in the world, notably Germany and Austria placed a higher importance on underpinning knowledge and a 'holistic view of the craft concept.'⁵ The tight adherence to the UK model in Australia ensured that Units of Competency described and developed job specific skills, with assessment being predominantly observational. Despite some reforms over time, this approach largely remains in place. But will this model serve us well into the future?

¹ Skilling: A National Imperative, Workforce Development Skills Needs Survey, Australian Industry Group, 2018

² Automation: Implications for training packages, Skills Impact and Deloitte Access Economics, 2017 and soft Skills for business success, DeakinCo, 2017

³ *Department of Jobs and Small Business, Industry Employment Projections, 2018*

⁴ Competence and competency-based training: What the literature says, Hugh Guthrie, NCVET, p8, 2009

⁵ *ibid*

A major change on the horizon is the impact of a revised AQF. While the details of the final model of the AQF, as recommended by the Noonan Review, have yet to be determined, the recommendations have been accepted and core structural options are apparent. The AQF is the primary policy architecture of the education and training system in Australia. Its central purpose is to ‘establish a basis for improving the quality, accessibility, linkages and public or labour market recognition of qualifications within a country and internationally.’⁶ The proposed changes to the AQF shift the architecture from a rigid and hierarchical model that privileges knowledge over skills, and higher education over vocational education. These changes propose a new model that enables qualification development more fit for the modern economy, now and into the future.

What is the opportunity afforded by a revised AQF?

As previously mentioned, a qualifications framework gives purpose to qualifications, their relationship to each other and the broader labour market. Under the existing AQF this occurs over 10 levels. The levels are hierarchical in nature, with knowledge as the primary differentiator. It contains learning outcomes for both the levels and qualification types, creating a complex and inconsistent taxonomy. The levels are the primary focus of the AQF, not the qualification types, yet the levels are poorly distinguished, even artificially contrived. For example, the level descriptors for AQF 5 and 6 are ostensibly the same. Skills and Application of Skills and Knowledge are tied to Knowledge. This automatically sets the default as Knowledge being more important than Skills or their Application.

Historically, our education and training system has been built and developed around public, and more recently private, training institutions. They have been the institutions providing formal credentialled learning. That has been their expertise and they have been funded on this basis. However, just as the world of work is rapidly transforming, education and training is receiving the same level of disruption. Education and training have not been the exclusive prerogative of training institutions for some time. The acceleration of digital applications and solutions, as well as skills and knowledge requirements emanating from work, has further disrupted the traditional pattern. We are now seeing micro-credentialing, digital badging, e-portfolios and proliferation of open source learning platforms.

In this world the design of a qualification is challenged, as are funding models, the role of institutions and the relationship between learning and credentialing. The organising principle for the education and training system in the future needs to evolve to something much more advanced, focussing upon the nexus of the individual and work. Qualifications will need to be designed differently, chunked differently and be accessible across contexts in many more varied and timely ways. They need to be able to support and build upon the dynamic and fluid combination of skills and knowledge. Qualifications will also not necessarily be assembled hierarchically. Individuals will access qualifications over their working life to meet the demands for critical reskilling and upskilling. This is what the revised AQF enables.

The revised AQF also gives us a unique opportunity to consider the bigger questions regarding vocational qualifications. It is timely to reimagine what vocational qualifications in Australia can and should be. This is not an ‘out with the old in with the new’ mantra. Rather, the opportunity to move to a more sophisticated, nuanced model. The central question that must drive this exploration is what is in the best interests of the individual, industry and the broader economy.

⁶ OECD, *Qualifications Systems: Bridges to Lifelong Learning*, Education and Training Policy, 2007, p. 22

What is it about our current qualifications that we most value?

Vocational qualifications, as they currently exist in Australia are widely admired and criticised in equal measure. At an individual qualification level, they can provide clear and valid guidance for skill acquisition leading directly aligned to an occupation. By any measure this is a worthy and desirable outcome. However, 61% of VET graduates end up in jobs directly aligned to the qualification undertaken. This alignment is at its most positive in the trades, at over 80%.⁷ The apprenticeship pathways will be explored further later. Of course, university graduates have a similar trajectory into the labour market. Four months after graduation 52% of graduates from generalist disciplines are in full time employment and between 86-97% for vocationally oriented disciplines, including pharmacy, medicine and dentistry.^{8 9} What appears to be more acceptable in higher education, is constantly a cause of criticism in VET. This almost certainly relates to the stated purpose of vocational qualifications – the direct alignment of qualification to occupation. It is possible that we need to broaden the definition of a vocational qualification. Alignment to job remains important but not exclusively so. Individuals entering the workplace now are likely to have up to seven careers and thirty-five jobs over the course of their working life.¹⁰ Does making a qualification so tightly linked to one particular job make sense going forward? Certainly, in licenced occupations and other highly technical and possibly regulated occupations it does. But in others, less so. Even where the link is tight, qualifications should also provide a strong platform upon which to build skill and knowledge development in an ongoing way, thus enabling enhanced labour market resilience.

The competency-based framework has underpinned our vocational qualifications since 1990s. The approach to CBT adopted in Australia was drawn from the United Kingdom. The definition focussed upon observable workplace performance. This enabled the development of a skilling system across a wide range of industries and occupations in areas that had never benefited from it previously. In some areas it was so fully embraced that it was enmeshed in industrial arrangements. Skills were recognised and accordingly given a value. This helped deliver skills and qualifications to people in jobs in a way that was previously not available. Over the following two decades nearly all occupations had skill-based pathways designed and available. Uptake may have been variable, but the options steadily became available. Australia had evolved from a country that had mass secondary education to one that has mass tertiary education. With the advent of the Bradley Review, that lead to the uncapping of higher education places at university and the continual development of vocational qualifications, now housed within training packages...the era of mass tertiary education had arrived. This is quite an achievement, something previous generations would not have dared dream about. Now that we are here and the world has changed, is it time to work out what are the desired vocational qualifications moving forward?

An aspect of vocational qualifications in Australia that is highly valued and internationally admired is the involvement of industry. The fact that units of competency describe actual work tasks inherently implies engagement with the workplace. These descriptions are verified and validated by industry, whether that be through the current Industry Reference Committee model or predecessor entities, i.e. Industry Skills Councils, Industry Training Advisory Boards (ITABS) etc. The endorsement process also involves industry. Committees that recommend the endorsement of units of competency, qualifications and training packages have also heavily involved industry, whether it is the current Australian Industry Skills Committee (AISC), or its predecessors National Skills Standards Committee (NSSC), National Quality Council (NQC), National Training Quality Council (NTQC) and National Training Board (NTB) and so forth. Of course, the ultimate endorsing authorities have always ultimately been governments.

⁷ NCVER

⁸ 2018 Graduate Outcomes Survey. QILT

⁹ Foundation for Young Australians (2015), 'How are Young people faring?'

¹⁰ Foundation for Young Australians (2016), "The New Work Mindset".

The principles of national application and consistency have also been key drivers. The concept of standards applying equally on a national basis has been important. This also implies that a standard cannot be duplicated. Multiple and competing versions of standards have been considered unhelpful. The concept that the training for a job in Bankstown is at the same standard and quality as in Bairnsdale is something of great value. Not only does it underpin labour market mobility, it also supports access and equity. Yet this important principle has not always been achieved. Funding differentials and state and territory implementation differences have often created different versions of the same thing.

At its heart, what is most valued about Australia’s vocational qualifications is their applied nature. Applied learning models are powerful and meaningful for broad cohorts of learners and workers. This includes apprentices and trainees, medical technicians, engineers, hairdressers, childcare workers, dental technicians and airline pilots.

What may vocational qualifications look like?

The proposed revised AQF presents a rare opportunity to reimagine what vocational qualifications can be. The ten-level framework is redesigned to eight bands.

Figure 1: AQF Architecture with Application bands. AQF Review Report 2019. P 36

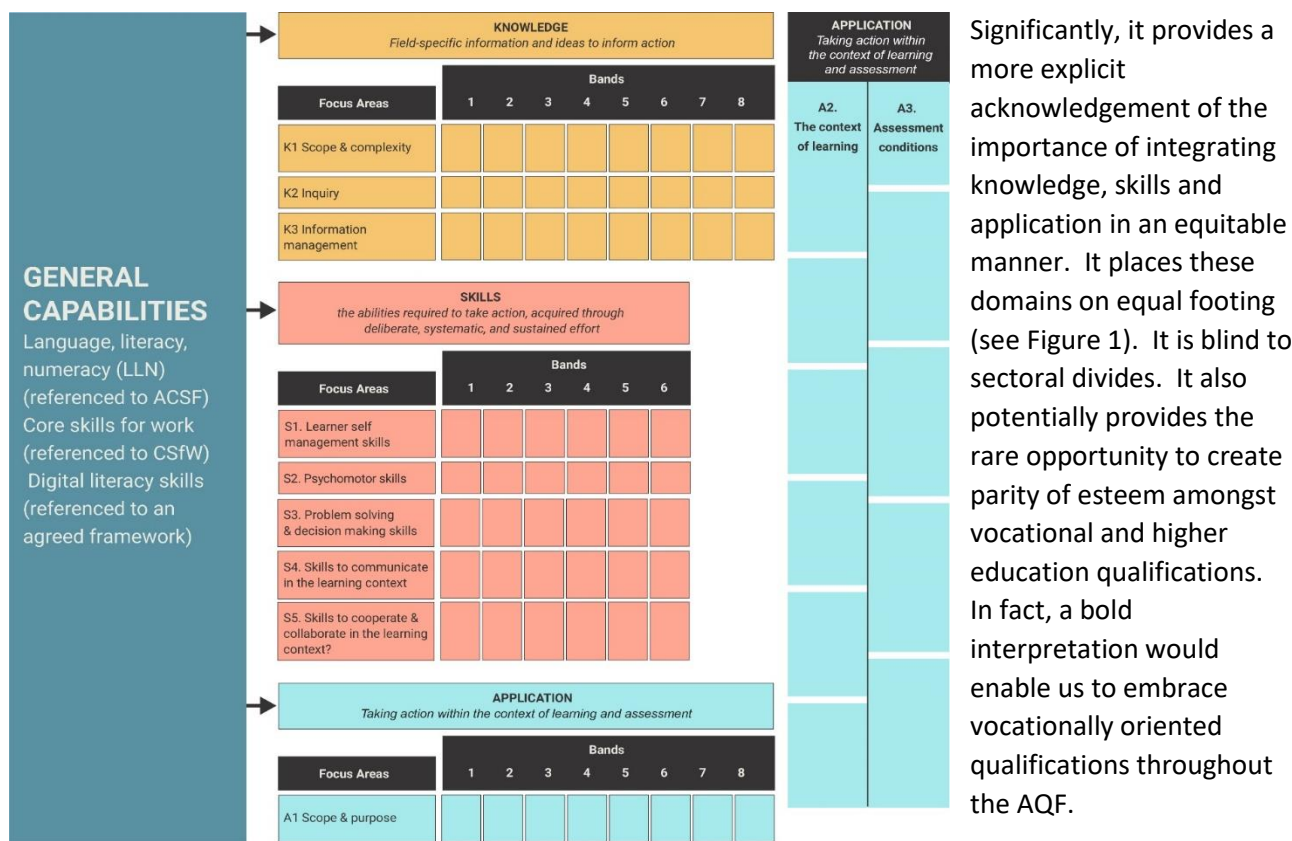
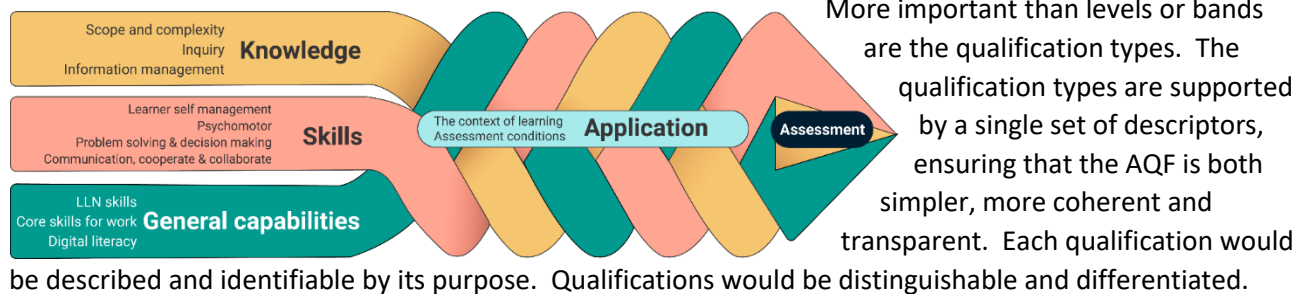
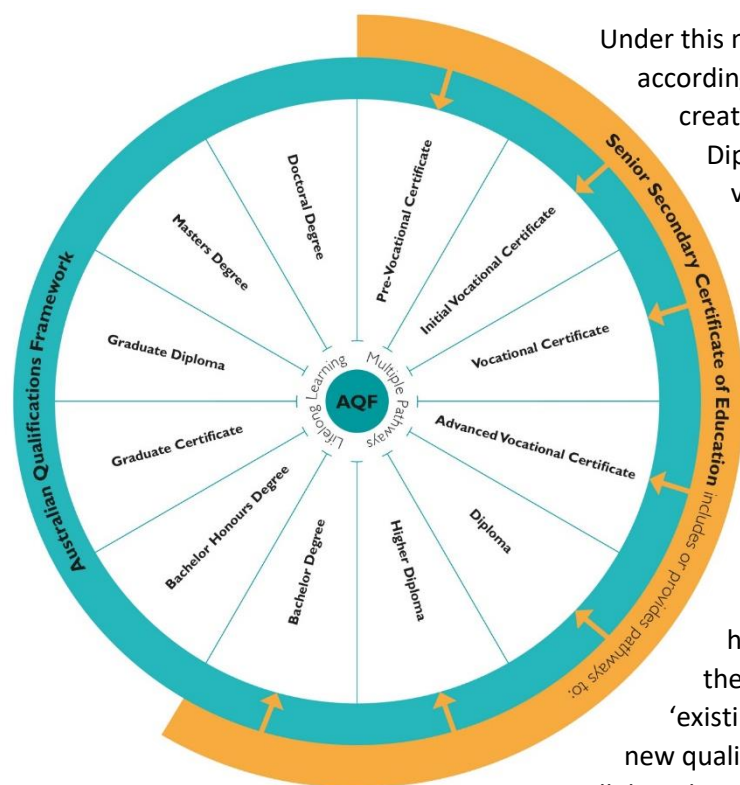


Figure 2: AQF domains and focus areas. AQF Review Report, 2019. P 30



Significant realignment would be required. The proposed revised qualification types are depicted in the following diagram:

Figure 3: Revised AQF diagram, AQF Review Report 2019 p 42



Under this new framework, qualifications are titled according to purpose. A new sequence of Diplomas is created (Diploma, Higher Diploma and Graduate Diploma), thereby opening up a pathway for vocationally oriented qualifications across more bands in the revised AQF. Notably, these diplomas transcend sectoral divides. This would enable both sectors, vocational and higher education, to have access to qualification types well suited to providing upskilling and reskilling opportunities.

Three models are provided in the Noonan Review report on possible alignment options to the revised eight band structure. Significant work will need to be undertaken here to ensure the best possible outcome of the proposed new arrangements. Realigning

‘existing’ qualification types and aligning entirely new qualification types will be a contentious process. It will disturb many existing or perceived relativities including

industrial. These will need to be carefully and thoughtfully considered so that a new beneficial settlement can be achieved.

The process of realigning qualification types and then re-developing qualifications themselves creates other opportunities. The training package paradigm in the VET sector has long been criticised as becoming an over-engineered and over-crowded space. Qualifications and units of competency have proliferated across the AQF. Much of this has been both valid and valuable but it is beyond dispute that there remain both units and qualifications without enrolments.

This opens the question of how much of a job needs to be specified, codified then assembled into a qualification to create a meaningful platform to learn how to undertake a job. Does a new entrant need to be competent in all aspects? Can we move to a model where critical elements are sufficiently developed in conjunction with knowledge, then combined with essential generic skills? This recognises that skills are developed over time, in context, whilst working. Obviously, the balance in the combinations between the various elements would differ across industries and occupations. Highly specified and regulated and licensed occupations, especially the traditional trades, would continue to benefit from high levels of specificity. Other occupations less so. Can our model evolve to industry and end-users determining which balance works best in their differing circumstances? Certainly, this would enable us to ‘clean up’ the enormity of the training package construct as it currently exists.

To achieve such an outcome would require other aspects of our education and training system to be challenged, including social and status assumptions. In a world where the shelf life of skills is reducing dramatically; where the technical skills and domain knowledge of an individual no longer match the performance standards required in the workplace, individuals will be required to re-skill and upskill in an ongoing manner. There is need for new skills, new knowledge and new ways of working – refreshing and extending vocational knowledge and skills will be the critical elements in sustained organisational productivity. This is an opportunity to rethink and reconfigure skill and knowledge development as an

ongoing activity; an accepted and encouraged part of an individual's working life. Keeping skills current and extending one's repertoire of skills does not always equate to acquiring new and/or different skills at a higher level (or band). For example, a skill set in the VET system that provides new skills to a landscape gardener in vertical gardens is not necessarily at a higher level than the landscaping trade qualification. Yet we often endorse them at higher levels for several reasons. We have an inbuilt assumption that adding to your skill base, a trade base in this example, must necessarily be at a higher level. Yet in the future it in fact may be a core and elective component of the initial trade qualification. Funding models, beyond an initial qualification, tend to kick in for higher AQF level attainments. Notwithstanding there is an important conversation to be had regarding who invests and pays for skills attainment, and where and when this occurs over individuals' working lives, public funding models have incentivised the development of some poorly aligned outcomes. This has added to the overcrowded and complex array of options in vocational education.

Credential creep has long been a problem across both sectors. Higher is better, regardless of whether the underpinnings have altered at all. A hierarchical, levels-based framework inadvertently promotes credential creep. A more sophisticated matrix of Knowledge, Skills and Applications may assist in revaluing qualifications across the framework.

What do we want from vocational qualifications going forward?

Ideally vocational qualifications would be designed and developed in a way that organises knowledge and that enables individuals to gain, retain or build upon meaningful work. They would have a purposeful balance between technical and generic skills, and knowledge, all of which could be developed through an engaging applied learning pedagogy. They would be nationally relevant and accessible. They could be completed in entirety or accessed via meaningful chunks. They would be widely valued and respected as vocational qualifications. They would set an individual up to commence their career, add to an existing career or assist with changing career.

To achieve this, we need to address the organising principle of vocational qualifications. Historically, the VET sector has defined qualifications around an individual job role. This has been achieved through a standards-based approach. Standards, or Units of Competency, have been developed to cover all the tasks required to undertake a job. The coverage has been complete or nearly so. Over time a range of other expectations have been added to the Units of Competency. They are now complex, prescriptive documents that describe tasks, quantify variables, provide delivery guidance, and so forth. They are also auditable. Other desirable aspects of a qualification have been force-fit into this model, such as generic skills. This approach has been continuously criticised for its downplaying of knowledge and the importance of it as both an explicit and underpinning requirement of skill acquisition.

This approach is focussed on the technical, the job. Yet, it is an individual that is educated and trained and ultimately develops the skills. Perhaps it is time to consider an approach that focusses upon the individual. Qualifications could be designed and developed with a different organising principle. This principle would be the individual: what does an individual need to obtain and perform successfully in the given job role? This would require the continuation of utilising agreed and approved standards. These should be occupational standards and significantly more cut down than the current units of competency. The remaining components needed to build a qualification could be assembled from a bank of generic units/modules, codified in a more appropriate way, i.e. better capture the depth and breadth of knowledge and other employability requirements. This would form the framework of a qualification. A hybrid model: one that takes the best from various approaches and applies in the way for which they were designed.

But this would just be the framing aspect of a qualification. Qualifications would be brought to life with the development of dynamic, customisable contemporary learning guidance. Some may call this curriculum. I am not advocating a return to nationally endorsed curriculum. Previous curriculum models have been as problematic and variable in quality as the training package construct has been at times. A debate needs to be had regarding appropriate models that would best serve this aspect. Importantly, a singular model does not need to be adopted.

Put simply, the historical approach in qualification development has focussed on the technical: creating the perfect 'pot'. Perhaps it is time to shift our focus more towards the human elements required in successfully participating overtime in the labour market? Instead of focussing on 'pots' we should focus on the 'potter'.

Future state...

Occupational Standards – occupational standards have been an important and central part of our vocational qualification design. A major redesign of the Unit of Competency construct is timely; however, the concept of occupational standards would remain. As previously discussed, the proposed occupational standards would be significantly streamlined from the current Unit of Competency construct, be more broadly based and focussed upon the combination of skills required to perform and overtime gain proficiency in a job. Occupational standards are a pivotal point of both industry engagement and endorsement. Industry is best placed to recognise what happens and is valued in their own workplaces. To disenfranchise industry from qualification and standards input would potentially lead to a damaging bifurcation of our vocational education and training system.

Micro-credentials – micro-credentials are here to stay. They have actually been a long-standing aspect of the VET system. Individuals have always found ways to access smaller chunks of learning whether through Skill Sets or cherry-picking from full qualifications. Micro-credentials, in their various forms will become increasingly important elements of re-skilling, up-skilling and skills deepening. Issues around funding, and AQF alignment and recognition will need to be tackled. The Unique Student Identifier (USI) will be an important feature of the solution going forward.

Learning guidance – one of the greatest aspects of vocational qualifications is their applied nature. This should be continually valued and strengthened. Essential work going forward will be the development of learning guidance and associated documentation. This will need to be thoughtfully managed so that we can move beyond a narrow instructional paradigm that has more comfortably worked for audit regimes, than for learners and workers.

Assessment – several key questions that relate to assessment are unanswered. Under the current training package regime, assessment sits against the Unit of Competency. This is also the point of audit. The consequence of this is that it has ushered in a risk averse delivery environment. The focus of the pedagogy has been compliance. Units of Competency are delivered separately and singularly and assessed accordingly. The opportunity for a meaningful aggregation or clustering of related units of competency for both delivery and assessment has been forgone. In effect, learners and workers have missed the opportunity to develop a greater understanding of the relationship between various elements of work. The audit-enforced atomisation of learning and work mitigates against the development of a more dynamic, learner-engaging, innovative applied learning environment.

We also need to further evolve our assessment systems so that both moderation and validation are regular features of our vocational system. This includes valuing formative assessment as part of the ongoing learning and work environment as well as holistic assessment that recognises the importance of an integrated outcome.

Qualifications in trades or regulated industries?

Apprenticeships form a core component of the vocational education and training sector and in many respects embody the purpose of vocational qualifications. Not only are they directly linked to a job, but in many sectors, they are the main pathway to skilled employment.

Apprenticeships have stood the test of time, despite declining numbers in recent years. It is worth reflecting on why this is the case. There are many different reasons why employers take on apprentices, whether it be to do something for the community, to help out an individual, or to ensure a pipeline of skills for the future. But for all these different reasons, the question is why apprenticeships? Why not favour some other form of getting skills? For example, most professional occupations are filled by graduates who have already invested in their training before they present themselves to an employer.

The value of an apprenticeship is that formal training is augmented by training on-the-job, over time, from other skilled workers. By the time the apprentice graduates, they have not only learnt technical skills, but they also have learnt work practices, made adjustments to suit the work environment, worked in teams with other skilled workers, and may have also dealt with customers. They have seen the tradespeople in their workforce deal with new problems as they arise and have seen the techniques they use to solve them. And they have done this for years. By the time they finish, they are ready to go. Most university graduates in contrast often have had no direct experience of the workplace, apart from part time jobs probably in unrelated industries and limited work placements. They need substantial work experience before they can be considered a professional.

Employment-based qualifications, i.e. traineeships or apprenticeships are purposefully designed for delivery through an apprenticeship pathway. This means they are recognised through a formal training agreement and the apprentice or trainee receives formal training in conjunction with employment. There have been many instances overtime of employment-based qualifications being delivered through institutional-only pathways. This has caused a great deal of friction and mistrust between many of the stakeholders in the vocational sector. It has also contributed to some poor employment prospects for the individual. Employers are reluctant to acknowledge the outcome of a trade-based qualification that is not developed in conjunction with work.

If a qualification was to be delivered only in an institutional setting for a trade outcome it would be designed differently. Accommodation would be made to mitigate the lack of sustained application in the context of work. Trade-based qualifications that are designed to be delivered through an apprenticeship pathway should be flagged accordingly as part of the endorsement process. We should move past the spurious argument that places parity of both institutional and employment-based pathways. They are different in terms of both delivery and outcome. The design of the qualification, where justified, should also be differentiated. This may have greater relevance in the design of traineeship pathways, that are more likely to overlap with institutional-based qualifications. This approach should be formally acknowledged and valued.

We should also broaden our understanding and valuing of employment-based qualifications throughout the AQF. Under the current AQF the recognised trade benchmark is certificate III. This does not mean that all apprenticeships are aligned to this level, rather that this is where relativities are derived. A more contemporary approach to apprenticeships may involve the decoupling of the recognised link between employment-based qualifications and the certificate III trade benchmark. The impact of this on the award system would need to be very carefully considered given that many award classification structures align certificate III with the minimum wage rates for tradespeople.

I contend that the nexus between the certificate III qualification and the employment arrangement can be uncoupled: the model can be successfully applied more broadly than trade-based or certificate III qualifications and has great potential to be adapted as a major work-based learning pathway at technician

and paraprofessional levels and beyond. Graduates from such a model would develop highly valued contemporary skills and employability, blending the best from vocational and higher education. These pathways may have particular appeal with new and emerging technologies that are deployed in workplaces long before the education and training system can adopt. They may also be suitable candidates for the utilisation of the new diploma stream of three qualifications made available in the revised AQF. This would enable horizontally diversified provision.

The broadening of employment-based qualification pathways will also assist with the need to retool the nation. Developing new and different skills utilising the right digital technology will be increasingly important. This has major implications for our education and training provision, as well its intersection with work. The apprenticeship system sits neatly in this space. It is capable of providing a high-quality, fully integrated learning and employment experience at the leading edge of economic transformation. The education and training system should not always have to chase the future; it should be part of it.

This model would allow us to acknowledge that some individuals will train in order to gain work; others will build their learning through work. Either way, the strength of work-based learning models will be important. Qualifications will need to be designed differently, chunked differently and be accessible across contexts in many more varied and timely ways. Many of the growth industries increasingly require higher levels of skills. The tacit limitation of the apprenticeship model — the delivery of certificate III trade skills alone — will render the apprenticeship system unable to meet many of the challenges of the digitised economy.

For the employment-based pathways and the apprenticeship system to realise their potential as being highly effective skills-development pathways while individuals are in employment, considerable reform is required. The qualifications undertaken will need to evolve to include new skills and different jobs. Not only will these need to be closely linked to our transforming workplaces, they will increasingly require integration across vocational and higher education. A tertiary education sector that understands and commits to enhance the pathways and outcomes across both sectors building on the strengths of vocational education and higher education is fundamental.

Conclusion

It is not often that opportunities arrive that create the space for us to imagine reform. The revision of the AQF has created this. Not only should we reflect on where we are, how we got here and what is valued, we can also project forward and imagine where we may go. Vocational qualifications are important, and we expect a lot from them. We need to consider how we can evolve to a new model, one that can deliver immediacy of utility and deeper development of knowledge and sustainable skills. Such a model does not need to be singular. We need to move to a world where different demands and applications can readily be accommodated and outcomes genuinely valued. We are now in a world where there is broad acceptance by individuals, industry and government that broadening and deepening of skills and knowledge is a given. The challenge is to reimagine vocational qualifications to make this possible.

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