

Work-based learning

A learning strategy in support of the Australian Qualifications Framework

Shayne D. Baker and Neil Peach

*Faculty of Business Education Law and Arts, University of Southern Queensland,
Toowoomba, Australia, and*

Malcolm Cathcart

Leeds Trinity University, Leeds, UK

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Abstract

Purpose – The purpose of this paper is to assess the extent to which work-based learning could potentially improve education and training pathways in Australia.

Design/methodology/approach – The paper reviews education and training provision in Australia through a contextualisation of the Australian Qualification Framework (AQF) with work-based learning pedagogy to determine the extent to which it might contribute to improved outcomes for learners.

Findings – People seeking to advance their career aspirations can consider the application of work-based learning to support lifelong learning pathways through the AQF.

Research limitations/implications – There is a need for further longitudinal studies on the outcomes of work-based learning for organisations, individual learners and education and training institutions.

Practical implications – The application of effective WBL approaches has the potential to create a much larger flow of learners from experiential and vocational backgrounds into undergraduate programmes and onto higher education programmes using a consistent and effective pedagogy.

Social implications – By actively considering the opportunities for learning at work and through work learners, educators and business managers may recognise that there would be more demand for work-based learning.

Originality/value – This paper represents an initial action research study which examines the role WBL can provide for life-long learning.

Keywords Pathways, Lifelong learning, Work-based learning, Australian Qualification Framework, Institutional learning, Work applied learning

Paper type Research paper

Introduction

The notions of learning being “lifelong” (as opposed to learning up to when you finish your formal “education”) have been evolving in parallel with related social and economic developments (such as changes in the nature of work, the expansion of information technologies and the globalisation of markets) over some 40 years or more (Andersson *et al.*, 2013; Australian Workforce and Productivity Agency, 2013; CEDEFOP, 2010; Pitman and Vidovich, 2013).

During the latter part of this evolution, there has been a development in education management to construct qualifications frameworks (QFs) not only as a means of connecting a person’s own lifelong learning journey with various levels of accredited learning (within the education services industry) but also to recognise learning that occurs outside formal education settings (AQF Council, 2009, 2013; CEDEFOP, 2013. As a result of



this development, QFs are now a part of governments' education policy, such as it applies within Australia, New Zealand, Europe and Britain. From a policy perspective, it appears that one important function of QFs is to build capacity into the education system to be able to respond to the labour market's need for not only higher levels of skills but also different skills.

However, it is clear that QFs do vary in purpose and are applied across a wide spectrum from being “transformational devices to descriptive tools” (CEDEFOP, 2010, p. 10). As well, QFs are a mechanism for bringing a level of “regulation” to the education and training industry and its various layers and sectors. For example, standards and obligations regarding the transfer, accumulation and recognition of credit are generally incorporated within QFs. This brings the promise of clear pathways of progression that enable learners to not only see and plan how to progress, but also to use their progressive achievements as the foundation for the next step. As part of the credit process, QFs have been designed to incorporate the recognition of non-formal learning (be it from work or personal interests) and to give certainty to the credit that will be granted from a previous level of (lower or related) study through articulation. This approach has become more recognised in higher education (HE) in the UK with a number of universities actively working to help “workers to be capable and competent” and to “encourage future progression and developments, and a genuine interrogation of practice, with the potential for new theories to be created in action” (Helyer, 2016, p. 1).

Building capacity into the education and training system is an important driver for QFs because contemporary developed economies are facing ongoing challenges to produce sufficient numbers of graduates to meet labour market demands (Australian Workforce and Productivity Agency, 2013; CEDEFOP, 2011; deWeert, 2011; Hackett *et al.*, 2012). In recent years in Australia, there has been a significant increase in enrolments in bachelor degree awards (AQF Council, 2009; Kemp and Norton, 2013). However, this growth begs the question to the authors from an action research perspective of whether the HE sector can sustain this development (deWeert, 2011; Kemp and Norton, 2013) without adopting other pedagogical approaches.

It seems likely that to achieve longer term continued growth in the number of tertiary level graduates, the education and training system in Australia will need to have a number of different pathways for both entry into and progression through undergraduate degrees. It is somewhat surprising with the emphasis on being a clever country that the Australian education and training system has been reluctant to embrace some developments, which have been adopted and proved to be effective in other developed countries and regions. In a country noted for its early development of initiatives such as distance education and professional doctorates, we seem to be reluctant to digress from such a strong focus on traditional, academic progression as the primary pathway for responding to the emergent needs of the Australian labour market, i.e. completed vocational qualifications (plus work experience) tend to provide entry and advanced standing into university programmes. A review of university credit policies indicates that the actual credit is more likely to be based on university qualifications that has been previously completed by an individual rather than any other source of learning.

Australia was an early adopter of QF having first established its national QF in 1995 (AQF Council, 2013; Burke *et al.*, 2009) with important iterations leading to the current Australian Qualifications Framework (AQF), which came into operation from 2015 (AQF Council, 2013). The challenges that have prompted the implementation of the AQF are many. One such challenge is that by 2025, according to modelling developed for Australia's latest workforce strategy, Australia could have a 2.8 million shortfall on the number of higher-skilled qualifications that industry will demand. (Australian Workforce and Productivity Agency, 2013, p. 9).

Another important challenge is that many Australians lack language, literacy and numeracy skills to participate in training and work. Only just over half (54 per cent) of Australians aged 15-74 years have been assessed as having the prose literacy skills needed to meet the complex demands of everyday life and work (Australian Workforce and Productivity Agency, 2013, p. 9). The journey for learners who seek to move between the vocational sector to HE is not an easy one. This represents the major challenge for the efficacy of policy tools such as the AQF. In short, there is a reasonable level of doubt that the current approach to education and training service delivery in Australia will achieve the nation's desired outcomes in regard to graduate numbers.

This review has been undertaken as part of an ongoing action research-oriented project being implemented by a small group of researchers seeking to develop, promote and expand work-based learning in Australia. As an action research group, we have applied our own version of work applied learning (WAL) approach by recognising the potential of a strong work-based learning pedagogy and have dedicated our efforts towards doing something about it. That is, we are researching, writing, and presenting on WBL to encourage wider collaboration, reflecting on our contribution and depending on how successful or unsuccessful we are modifying our efforts anew towards effecting a change in education and training (Garnett *et al.*, 2016, p. 59).

Work-based learning is an important pathway available to learners in the UK (and to varying degrees in other European countries) and the project members set out to better understand whether work-based learning is likely to be a beneficial addition to the provision of learning pathways for individuals engaged in lifelong learning and achieving graduate targets in Australia.

The current position in the Australian HE context is to apply the notion of work-based learning to many other iterations that can certainly be accepted as WBL such as work integrated learning, industry placement, work experience albeit under a compliance to an institutional curriculum framework. Quite understandable though the challenge is rapidly shifting towards fostering "performative knowledge which meets the needs not just of individual professionals but also of their professional contexts and organisations" (Garnett *et al.*, 2016 p. 57).

Summary of methodology

To support the review of the Australian education system's performance and to ensure the need for completeness, the authors first undertook a desktop review of this performance using key elements of the AQF. The researchers identified six key issues from the literature (AQF Council, 2009; Burke *et al.*, 2009; CEDEFOP, 2010; CEDEFOP and EQF, 2013; CEDEFOP and ETF, 2013; AQF Council, 2009; deWeert, 2011; Guthrie *et al.*, 2011; Hackett *et al.*, 2012), which would provide the basis for a complete review of performance. The issue headings identified from this analysis are as follows: labour market; standards and quality; international; credit and RPL; pathways; and responsiveness. The researchers applied these issues as the foundation for a baseline assessment of the AQF with a view to using this baseline to assess the extent to which new offerings, such as work-based learning, would be likely to lead to improved performance.

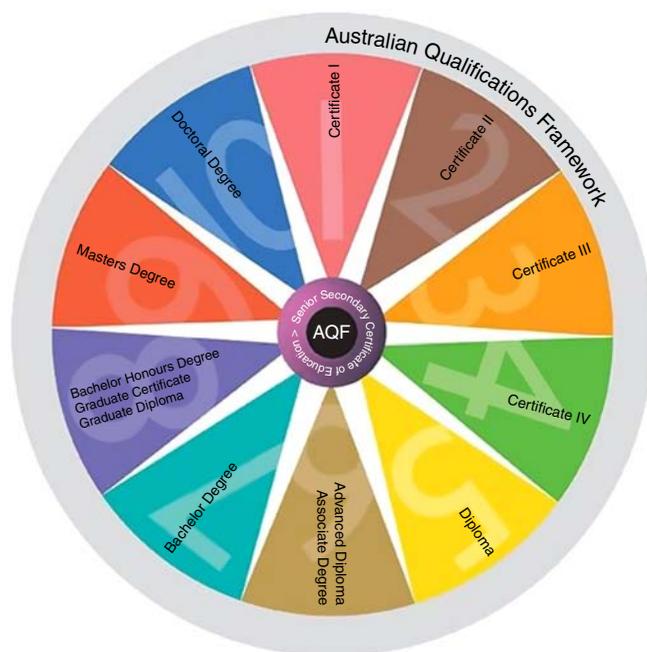
Drawing on previous work-based learning research and literature (Cairns and Malloch, 2011; Costley, 2000, 2011; Costley and Lester, 2012; Garnett, 2013; Garnett *et al.*, 2009; Garnett and Young, 2008, 2009; Cunningham *et al.*, 2004; Portwood, 2000; Roodhouse and Mumford, 2010), the key characteristics of work-based learning were mapped against the overall baseline assessment of education and training services, in order to identify and determine if and where improvements can potentially be achieved.

Review of education and training services in Australia

As noted previously, the contemporary concepts of lifelong learning and QFs have gained in status to be the foundation for extensive efforts by governments, educators and business to respond to major changes in labour markets. The characteristics and structure of labour markets are changing, in part because the nature of work is changing. Work is changing because both the objects and means of production are changing and because product life cycles have shortened (Australian Workforce and Productivity Agency, 2013). As a result, the labour market now requires more people to have more knowledge skills. It also requires people to change jobs (and to re-skill) more often. Andersson *et al.* (2013, p. 406) suggest that:

As a concept, lifelong learning partly replaces former concepts such as adult education (Lindeman, 1926), and lifelong education (Faure, 1972). Lifelong learning has become the dominant manner in which the education and learning of adults is addressed in policy terms.

No longer is it expected that a person's original training or qualification will be the primary basis of what they do at work over their working life. This is the context within which the AQF has been developed. The primary intent of the AQF is usually illustrated as a wheel with equal segments given to each of the ten levels from leaving secondary school (Level 1), post-secondary, vocational to the highest academic award (Level 10) (AQF Council, 2013). The thrust of the AQF is directed towards supporting a life-long learner's journey, through time and the achievement of qualifications around the wheel (see Figure 1). All segments are depicted as being equal in size and connected to the next one through a white zone. This illustration conveys the impression of a simple, consistent progression from the lowest level to the highest level of learning.



Source: AQF Council (2014)

Figure 1.
The Australian
Qualifications
Framework wheel

In conjunction with detailed descriptions of the learning and the learning outcomes expected at each of the ten levels in the circle, the AQF also includes several supporting policies that underpin the overall objectives of the framework (AQF Council, 2013). The material is comprehensive and framed in the familiar lexicon of many QFs developed in jurisdictions throughout the world. This does not detract from the essential thrust of the material and it is very clear that the primary objective of the AQF is to enable a learner to progress around the circle through a supported, rewarding, integrated and articulated learning journey. This paper endeavours to assess the extent to which this is what is actually experienced or provided to learners in Australia.

As noted earlier, the framework for this paper comprises six key issues (and their related questions), which have been identified from a study of the literature relating to QFs. In simple terms, the objective is to make a broad assessment of how well what is depicted in Figure 1 is actually a reflection of the operation of education and training systems in Australia. Of particular interest is the qualifications offered at level seven and/or eight by the university and the higher vocational sectors. The issues headings and questions developed by the research group through consultation and analysis are as follows:

- (1) Labour market – how are education and training services linked to the demands of the labour market?

Answer – the education and training sector has generally responded by increasing enrolments and graduate numbers. In the vocational education and training (VET) sector this is generally achieved through a specific funding-driven initiative to address labour market needs. The HE sector has an emphasis on demand-driven funding, uncapped numbers and student loan schemes, as the basis to achieve the government targets. The latter approach can sometimes prove to be unsustainable as evidenced by the lack of employment opportunities for graduates in comparison to vocational graduates.

- (2) Standards and quality – is there an integrated system to allow a progressive learning journey for each individual student/learner?

Answer – the education and training sector is still a “split” governance model. This could be viewed as a flaw and substantial failure in governance design in the system as even the adoption of a unique student identifier (Australian Government, 2016) to record and manage ongoing VET does not extend into the HE sector. Without some significant change to governance it will not provide an incentive to adopt new practices or standards beyond traditional lecture/classroom style delivery.

- (3) International – to what extent is there “mobility” for learners and workers across national boundaries?

Answer – the AQF is well aligned with other OFs throughout the world and there are clear and high levels of both student and worker mobility. The current market suits the education and training sector’s formal academic orientation and traditional delivery. The success of the approach to the migration of skilled workers provides a “back up” to shortfalls in the provision of education services domestically.

- (4) Credit and RPL – are different forms of knowledge recognised and can learners gain full recognition of their prior achievements as they progress on their learning journey?

Answer – the overall approach by the education and training sector is still somewhat limited through institutional traditions that recognise predominately classroom and/or institutional outcomes. Evidence indicates that this situation is developing more rapidly in the VET sector (particularly in the private provider sector).

- (5) Pathways – are there multiple connected/integrated ways in which learners can gain their learning and qualifications?

Answer – it appears that alternative pathways for learners are more likely to be implemented by small independent providers, vocational providers, while government and HE institutional funding models support the single mass attendance tradition of teaching and learning.

- (6) Responsiveness – are there a variety of education products to suit varying needs of learners with different backgrounds?

Answer – the preferred approach by education and training institutions is towards learners who “fit the system”. The added demands and workload for staff are a barrier to consider an alternative education programme offering that alters the role of the teacher and his/her relationship with course content and the learner.

Whilst previous reviews and literature provide a basis for developing these headings/questions, it is also considered that the objectives expressed within the AQF itself provide a good source for framing the review (AQF Council, 2013).

As developments in regard to AQF were reviewed, it was difficult not to note the potential for the “reform” agenda of the AQF to be overtaken by a “marketing” agenda that potentially shifts emphasis from driving change in education and training services to growing business opportunities and maintaining the status quo. Others have noted the scope for QFs to be simply “descriptive” rather than “transformational”. It is difficult to avoid the conclusion that Australia is moving more towards a “descriptive” QF as evidenced by the dilution of the strategic agenda of the Australian Qualifications Council, through its narrowing planning objectives over recent years (AQF Council, 2014).

If there is no clear evidence of responsiveness in the AQF to the major issues confronting the community and its economy, it is possible that its policy life cycle is will be more short lived than anticipated. Of course, it would not be the first policy agenda to be rendered ineffective by key stakeholders with opposing interests. It is against this background that we now consider each of the six headings in turn drawing on the contribution of Helyer, Boud and Solomon, and Major and conclude with a summary “answer” to each issue/question from a work-based learning perspective.

Characteristics of work-based learning

As advocates and practitioners of WBL, the authors have a unilateral view that many of the challenges that are being experienced in Australia can be addressed more effectively through adoption of WBL pedagogical approaches that transcend the artificial divide between VET and HE. The characteristics of WBL will be highlighted by applying the same questions used above to assess education and training services in Australia. This approach provides a real opportunity to both discuss some key characteristics of work-based learning and to identify the points where this pathway could make a fundamental improvement to education and training services in Australia.

The revised set of questions developed by the WAL group then becomes:

- Labour market – how is work-based learning linked to the needs of the labour market?
- Standards and quality – is there an integrated system to allow a progressive learning journey for each individual student/learner using work-based learning?
- International – to what extent is there “mobility” for learners and workers across national boundaries that have undertaken work-based learning?

- Credit and RPL – are different forms of knowledge recognised and can learners gain full recognition of their prior achievements as they progress on their learning journey using work-based learning?
- Pathways – are there multiple connected/integrated ways in which learners can gain recognition and qualifications using work-based learning?
- Responsiveness – does work-based learning provide a variety of education products to suit varying needs of learners with different backgrounds?

Labour market

The curriculum of a work-based learning qualification is built upon and around the learning agreement, established through a process of resolution negotiated between the education and training providers, the student and the student's employer (Garnett, 2000; Major, 2016). Learning objectives are established for each student and these are intended to reflect a consensus of the parties. The common ground that reflects this consensus means that the curriculum is not borne out of a particular disciplinary perspective, nor is it borne out of a predefined vocational or professional prescription (Portwood, 2000; Major, 2016). This means that work-based learning sits in a unique and direct relationship between the workplace (and its needs) and the student's personal and professional aspirations. Unlike conventional vocational or disciplinary courses/programmes, it is not separate to or outside the labour market. It is embedded in it. Consequently, it is considered that any risk associated with conventional programmes not being relevant (in that they sit outside the labour market), are greatly reduced through a work-based learning approach.

Standards and quality

The philosophy of work-based learning is to recognise a broad range of learning and learning experiences without any diminution in the standards and quality of that learning (relative to traditional, academically centric programmes) (Brodie and Irving, 2007; Doncaster, 2000; Garnett, 2010). There is no requirement to adjust any of the standards set out in QFs which is well evidenced by the accreditation of work-based learning programmes across the UK, and to a much lesser extent (by virtue of the limited number of such programmes being offered) in Australia.

Boud and Solomon (2001) captured the potential influence of WBL and its ability to “equip and qualify people already in employment to develop lifelong learning skills, not through engagement with existing disciplines, bodies of knowledge or courses defined by the university, but through a curriculum unique for each person”.

In fact, the standards and quality of work-based learning are applied in an integrated manner to experiential learning and academic learning and in so doing, it is ensured that all forms (of learning) are dealt with in the same comprehensive manner. In this way, any risks associated with the unstructured approach to different types of learning (evident in the current diverse and at times unstructured and unfunded approaches to RPL in Australian institutions) are thus avoided. The epistemological and pedagogical justification for work-based learning is now well established in universities (Costley, 2000; Garnett and Young, 2008, 2009; Garnett and Workman, 2009; Major, 2016; Portwood, 2000). However, the primary issues for quality and standards in the Australian context revolve ensuring the removal of any ad hoc, institution-by-institution, department-by-department interpretation of different forms of learning (and its recognition).

International

It is clear that because the standards and quality of work-based learning operate within the overall existing QFs in place in those jurisdictions where there are these two elements in

place – QF and work-based learning, the mobility issue is no different to any other award in those jurisdictions and with over 40 countries adopting QFs, the opportunity for mobility will be enhanced. There is also opportunity for students to be undertaking WBL programmes from within country and with overseas institutions, such as Chester and Middlesex universities.

Credit and RPL

As noted previously, work-based learning brings all credit and RPL considerations into a structured, formalised and financially sustainable environment. It is testimony to the enormous financial rewards accruing to Australian universities for their core academic programmes that they have not recognised further organisational and financial benefits to them in adopting the philosophy and structure of work-based learning. As set out in the literature (Armsby, 2000; Armsby and Costley, 2000; Ball and Manwaring, 2010; Costley and Armsby, 2007; Costley *et al.*, 2010; Cunningham *et al.*, 2004; Major, 2016), the structure of work-based learning is simple, with a focus on three primary elements: review of learning and claims for recognition of past learning (incorporating academic and experiential learning); development of a learning plan incorporating learning objectives and a preferred award title that encapsulates the thrust of the qualifications sought; and work-based projects that provide the opportunity for and evidencing of learning to achieve the student's desired learning outcomes.

Pathways

Unlike the majority of traditional formal learning pathways offered by Australian providers, work-based learning offers a customised pathway for each student. To the extent that the structure set out above is the basis for all work-based learning awards and is more or less a “given”, this “framework” enables a student to pursue multiple pathways to achieve their learning objectives. This may involve elements of course work as required but also involves completely individualised project plans and activities that plot the course of the student's learning journey. The way to achieve learning is via the medium of work-based projects/activities which may involve the student in multiple roles, in multiple settings and seeking to achieve divergent outcomes. It may, as is the case at Chester University (Major, 2016) involve undertaking or integrating more traditional forms of university-based study through the selection of modules from across the range of the university's module portfolio, assuming that those selected made for a coherent programme and that the student had the necessary prerequisites to undertake the study.

The net outcomes of this learning may be a new product or an improved way of doing a particular activity or project at work. In any event, the artefacts for assessment may be presented in a variety of ways consistent with the student's learning outcomes.

There is the added benefit identified by Wall and Tran (2016, p. 230) of the “enabling opportunities for work-based learners to share their current localised knowledge and understandings helps to boost their agency, and therefore motivation to engage”.

All these divergent approaches are subjected to assessment in ways consistent with all education and training programmes and in line with the QF for that jurisdiction. The scaffolding of the work-based learning programme provides a multiplicity of in-built pathways.

Responsiveness

The responsiveness of work-based learning begins with the philosophy and orientation of the programme to align the support “beside” the student, and in so doing, facing the learning challenge with them. This is the model championed by the early twentieth century educationalist and philosopher John Dewey, and is the basis for the concept of the work-based

learning tutor assisting the learner in understanding and explaining the learning they are seeking (Elkjaer, 2008; Lester, 2004; McKernan, 2007). Without having a predetermined set of knowledge facts to deliver to the student, the work-based learning tutor/facilitator is able to respond to the specific circumstances the learner wishes to explore and to advise the learner on the way forward; on ways and means of handling the situation and in coming to terms with an environment where the learner is undertaking work in areas that have not been codified to the extent needed by the learner and their organisation.

Importantly it has been noted that it is the essence of this “responsiveness” that may cause some hesitation on the part of some practising academics to entertain the practise of work-based learning. It is the necessity for this responsiveness that we contend is causing senior administrators to avoid such flexible, hand-crafted solutions. There is a definite shift, implicit in work-based learning, in relation to the power relations between student and adviser. Our observation is that education and training providers have many staff members who are not well experienced in workplaces outside the education and training sector. Furthermore, with the “casualisation” of the workforce (Halcomb *et al.*, 2010), many staff members who are responsible for the delivery of standard “content-” driven programmes are contracted to deliver fixed, existing, content-based programmes. Under these circumstances and with the advantages of very large “cohorts” in popular subjects, this “cookie cutter” method for education and training delivery offers substantial profitability under existing government funding arrangements.

Summary of WBL key characteristics

Utilising the brief review above, it can be seen that work-based learning has the potential to improve results in five of the six areas reviewed in this study. The reasons for this go to the heart of what makes contemporary work-based learning an important reform mechanism for education and training.

Work-based learning:

- connects education and training into the workplace and builds the curriculum around what knowledge and learning is valued and needed by individuals and their workplaces;
- puts equal value on accredited learning regardless of its source or origin;
- has an established pedagogy which aligns with existing QFs enabling it to contribute to international (student and worker) mobility and to conform with established quality and regulatory requirements;
- provides a multiplicity of learning pathways and responsiveness by virtue of a simple and clear structure; and
- provides the opportunity for the teacher/tutor to “sit beside” the student/learner as they confront the issues and problems which are important to each student and their workplaces.

Given the characteristics of work-based learning, it is apparent that a broader implementation of work-based learning has the potential to create a much “wider neck” in the hourglass, which has been used to describe HE services in Australia. This “wider neck” is illustrated in Part 1 of Figure 2 and is intended to represent a larger flow of learners from experiential and vocational backgrounds into undergraduate programmes. The 2013 National Workforce Development Strategy reiterates just how narrow this “neck” is – in 2010, 78 per cent of learners with a prior VET qualification were not given any credit on entry to university (Australian Workforce and Productivity Agency, 2013). Work-based learning is a well-established approach to teaching and learning and provides an integrated method for assessing all types of prior learning.

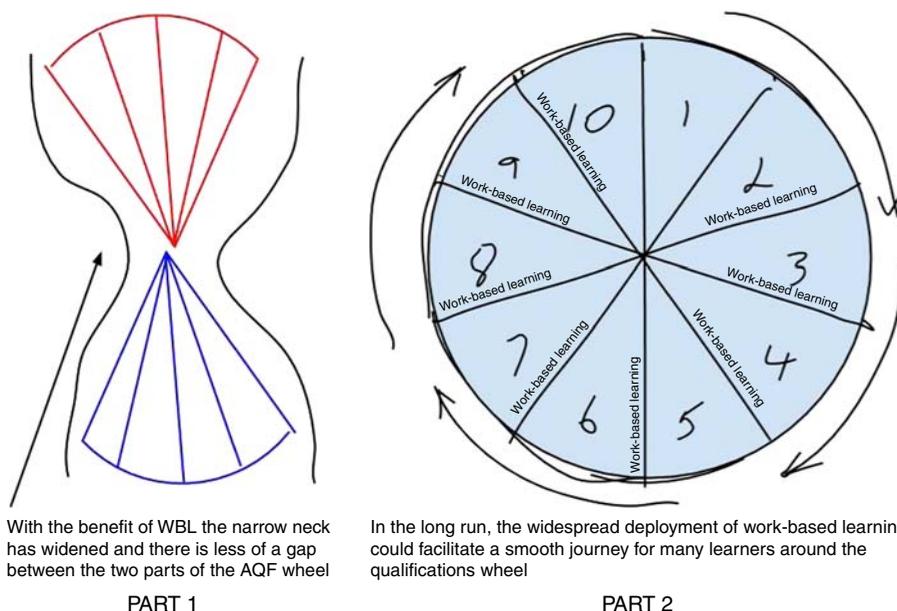


Figure 2. The evolutionary development of the Australian Qualifications Framework with the benefit of increased levels of work-based learning

Over time, a wider implementation of work-based learning could contribute greatly to building a single, “connected” wheel of learning similar to the hypothesised one illustrated on page six of this paper and the flux that links and encourages the connection is work-based learning. The academic foundations of work-based learning are now well established and, with sufficient interest in and application of work-based learning, the AQF wheel could be reconnected by the incorporation of work-based learning and better provide the pathway between each of its segments. This reconnection is illustrated in Part 2 of Figure 2, with an element of work-based learning being able to contribute between all levels in the QF.

In considering the two parts of Figure 2, it is important to recognise that work-based learning is only being presented as “one” pathway and that a vibrant, sustainable education and training services environment will strongly support multiple, diverse pathways. The dominant, existing “academic-centric” pathway provides excellent opportunities for many learners. This is because content driven, discipline/vocational centric programmes are highly efficient and widely understood and accepted. However, those learners who do not “fit” this dominant pathway are less likely to progress and thereby, a significant opportunity for expanding our workforce skills is lost.

Conclusion

This review arises from the confluence of three important areas of enquiry that are as follows: the notions of lifelong learning education policy approaches such as QFs and work-based learning. The objective of this review was to assess the extent to which work-based learning could potentially improve education and training pathways in Australia. To do this, a desk review of education and training services in Australia was undertaken (using key elements of the AQF as a basis for the review) and areas of achievement and improvement were identified. A review of work-based learning was then undertaken to identify its key characteristics and to assess the extent to which it would operate as a mechanism for improving education and training services in Australia. Several elements of work-based learning were identified that could lead to a material improvement in education

and training services in Australia. However, this research has also identified underlying barriers within the Australian education and training system that are likely to inhibit future benefits of work-based learning by Australian providers.

Some authorities have already identified that new providers and new institutions will enter the market to respond to the more flexible needs of individual learners, businesses and the labour market (deWeert, 2011). Australian universities have a strong future demand for bachelor degrees offered via the conventional academic pathway and the incentives are very high to consider any diversion from this path. In the absence of government policy, which was a significant factor in the development and growth of work-based learning in the UK (Garnett and Workman, 2009), the growth of work-based learning will, most likely, depend on these new providers: be they new institutional structures or players from other jurisdictions. Early indications from the current research being undertaken into work-based learning in Australia certainly is that learners' and employers' interest in work-based learning is growing and likely to expand. The challenge then for HE in Australia is to embrace work-based learning as the "architecture of HE" (Boud and Solomon) that is driven by the learner and not the institution.

References

- Andersson, P., Fejes, A. and Sandberg, F. (2013), "Introducing research on recognition of prior learning", *International Journal of Lifelong Education*, Vol. 32 No. 4, pp. 405-411, doi: 10.1080/02601370.2013.778069.
- AQF Council (2009), "Building better connected learning through improved student pathways (pathways project report)", Commonwealth of Australia, available at: www.aqf.edu.au/wp-content/uploads/2013/06/Pathways-Project-Technical-Report-November-2009.pdf (accessed 2 April 2017).
- AQF Council (2013), *Australian Qualifications Framework*, 2nd ed., Commonwealth of Australia, Canberra, available at: www.aqf.edu.au/wp-content/uploads/2013/05/AQF-2nd-Edition-January-2013.pdf (accessed 21 March 2017).
- AQF Council (2014), "AQF council's terms of reference and strategic plan", available at: www.aqf.edu.au/aqf-governance_2/prev-arrangements/australian-qualifications-framework-council/ (accessed 17 January 2017).
- Armsby, P. (2000), "Methodologies of work based learning", in Portwood, D. and Costley, C. (Eds), *Work Based Learning and the University New Perspectives and Practices Seda Paper 109*, Staff and Educational Development Association (SEDA), Birmingham, pp. 35-42.
- Armsby, P. and Costley, C. (2000), "Research driven projects", in Portwood, D. and Costley, C. (Eds), *Work Based Learning and the University: New Perspectives and Practices Seda Paper 109*, Staff and Educational Development Association (SEDA), Birmingham, pp. 67-71.
- Australian Government (2016), "Unique student identifier", available at: www.usi.gov.au/ (accessed 21 May 2017).
- Australian Workforce and Productivity Agency (2013), "Future focus: 2013 national workforce development strategy", available at: <https://docs.education.gov.au/system/files/doc/other/futurefocus2013nwd-2013.pdf> (accessed 6 April 2017).
- Ball, I. and Manwaring, G. (2010), *Making it Work: A Guidebook Exploring Work-based Learning (Guidebook)*, Quality Assurance Agency for Higher Education, Gloucester.
- Boud, D. and Solomon, N. (Eds) (2001), *Work-based Learning: A New Higher Education?*, Continuum research methods, Society for Research into Higher Education & Open University Press, Buckingham.
- Brodie, P. and Irving, K. (2007), "Assessment in work-based learning: investigating a pedagogical approach to enhance student learning", *Assessment & Evaluation in Higher Education*, Vol. 32 No. 1, pp. 11-19, doi: 10.1080/02602930600848218.
- Burke, G., Keating, J., Vickers, A., Fearnside, R. and Bateman, A. (2009), *Mapping Qualifications Frameworks across APEC Economies*, APEC Human Resources Development Working Group, Singapore, available at: www.voced.edu.au/content/ngv17218 (accessed 16 January 2017).

- Cairns, L. and Malloch, M. (2011), "Theories of work, place and learning: new directions", in Malloch, M., Cairns, L., Evans, K. and O'Connor, B.N. (Eds), *The Sage Handbook of Workplace Learning*, Sage Publications Ltd, Los Angeles, CA, pp. 3-16.
- CEDEFOP (2010), "Linking credit systems and qualifications frameworks: an international comparative analysis", Research Report No. 5, European Centre for the Development of Vocational Training (Cedefop), Luxembourg City.
- CEDEFOP (2011), "Labour-market polarisation and elementary occupations in Europe", Research Paper No. 9, Publications Office of the European Union, Luxembourg City.
- CEDEFOP (2013), "Qualifications frameworks in Europe: forging the right links", Briefing Note Report, European Centre for the Development of Vocational Training, Luxembourg.
- CEDEFOP and EQF (2013), "Information on the Cedefop study on 'Qualifications at Level 5 of the EQF'", EQF Advisory Group, Luxembourg.
- CEDEFOP and ETF (2013), "Global national qualifications framework inventory: country Cases from EU and ETF partner countries", research report, European Training Foundation, Luxembourg.
- Costley, C. (2000), "The boundaries and frontiers of work based knowledge", in Portwood, D. and Costley, C. (Eds), *Work Based Learning and the University: New Perspectives and Practices Seda Paper 109*, Staff and Education Development Association, Birmingham, pp. 23-33.
- Costley, C. (2011), "Workplace learning and higher education", in Malloch, M., Cairns, L., Evans, K. and O'Connor, B.N. (Eds), *The Sage Handbook of Workplace Learning*, Sage Publications Ltd, Los Angeles, CA, pp. 395-406.
- Costley, C. and Armsby, P. (2007), "Methodologies for undergraduates doing practitioner investigations at work", *Journal of Workplace Learning*, Vol. 19 No. 2, pp. 131-145.
- Costley, C. and Lester, S. (2012), "Work-based doctorates: professional extension at the highest levels", *Studies in Higher Education*, Vol. 37 No. 3, pp. 257-269, doi: 10.1080/03075079.2010.503344.
- Costley, C., Elliott, G.C. and Gibbs, P. (2010), *Doing Work Based Research*, Sage Publications, Los Angeles, CA.
- Cunningham, I., Dawes, G. and Bennett, B. (2004), *The Handbook of Work Based Learning*, Gower, Aldershot.
- deWeert, E. (2011), "Perspectives on higher education and the labour market (review of international policy developments)", research report, Center for Higher Education Policy, Enschede.
- Doncaster, K. (2000), "Recognising and accrediting learning and the development of reflective thinking", in Portwood, D. and Costley, C. (Eds), *Work Based Learning and the University: New Perspectives and Practices, SEDA Paper 109*, Staff and Education Development Association, Birmingham, pp. 51-57.
- Elkjaer, B. (2008), "Pragmatism a learning theory for the future", in Illeris, K. (Ed.), *Contemporary Theories of Learning: Learning Theorists... In Their Own Words*, Routledge, Hoboken, NJ.
- Garnett, J. (2000), "Organisational culture and the role of learning agreements", in Portwood, D. and Costley, C. (Eds), *Work Based Learning and the University Seda Paper 109*, Staff and Educational Development Association, Birmingham, pp. 58-66.
- Garnett, J. (2010), "Recognising, assessing and rewarding work experience", in Mumford, J. and Roodhouse, S. (Eds), *Understanding Work Based Learning*, Ashgate Publishing Group, Farnham.
- Garnett, J. (2013), *Middlesex University Work Based Learning – Work Based Learning field of Study*, Middlesex University Press, London.
- Garnett, J. and Workman, B. (2009), "The development and implementation of work based learning at Middlesex University", in Garnett, J., Costley, C. and Workman, B. (Eds), *Work Based Learning Journeys to the Core of Higher Education*, Middlesex University Press, London, pp. 2-14.
- Garnett, J. and Young, D. (Eds) (2008), *Work-based Learning Futures 11*, University Vocational Awards Council, Middlesex University, available at: www.uvac.ac.uk/resources/publications/ (accessed 23 November 2016).

- Garnett, J. and Young, D. (Eds) (2009), *Work-based Learning Futures 111*, University Vocational Awards Council, Derby, available at: www.uvac.ac.uk/resources/publications/ (accessed 13 December 2016).
- Garnett, J., Abraham, S. and Abraham, P. (2016), "Using work-based and work-applied learning to enhance the intellectual capital of organisations", *Journal of Work-Applied Management*, Vol. 8 No. 1, pp. 56-64.
- Garnett, J., Costley, C. and Workman, B. (Eds) (2009), *Work Based Learning Journeys to the Core of Higher Education*, Middlesex University Press, London.
- Guthrie, H., Stanwick, J. and Karmel, T. (2011), "Pathways: developing the skills of Australia's workforce", research report, National Centre for Vocational Education Research, Adelaide, available at: www.ncver.edu.au/publications/publications/all-publications/pathways-developing-the-skills-of-australias-workforce# (accessed 13 December 2016).
- Hackett, L., Shutt, L. and MacLauchlan, N. (2012), "The way we'll work: labour market trends and preparing for the hourglass", research report, University Alliance, London.
- Halcomb, E., Andrew, S., Peters, K., Salamonson, Y. and Jackson, D. (2010), "Casualisation of the teaching workforce: implications for nursing education", available at: <http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1748&context=smhpapers> (accessed 23 February 2017).
- Helyer, R. (Ed.) (2016), *Facilitating Work-Based Learning: A Handbook for Tutors*, Palgrave, London.
- Kemp, D. and Norton, A. (2013), "Review of the demand driven funding system review of the demand driven funding system", available at: https://docs.education.gov.au/system/files/doc/other/review_of_the_demand_driven_funding_system_report_for_the_website.pdf (accessed 2 April 2017).
- Lester, S. (2004), "Conceptualising the practitioner doctorate", *Studies in Higher Education*, Vol. 29 No. 6, pp. 757-770.
- McKernan, J. (2007), *Curriculum and Imagination: Process Theory, Pedagogy and Action Research*, Routledge, Florence, KY.
- Major, D. (2016), "Models of work-based learning, examples and reflections", *Journal of Work-Applied Management*, Vol. 8 No. 1, pp. 17-28.
- Pitman, T. and Vidovich, L. (2013), "Converting RPL into academic capital: lessons from Australian universities", *International Journal of Lifelong Education*, Vol. 32 No. 4, pp. 501-517.
- Portwood, D. (2000), "An intellectual case for work based learning as a subject", in Portwood, D. and Costley, C. (Eds), *Work Based Learning and the University: New Perspectives and Practices SEDA Paper 109*, Staff and Educational Development Association, Birmingham, pp. 17-22.
- Roodhouse, S. and Mumford, J. (2010), *Understanding Work-Based Learning*, Gower, Surrey.
- Wall, T. and Tran, L. (2016), "A transcontinental dance: enriching work-based learning facilitation", in Helyer, R. (Ed.), *Facilitating Work-Based Learning A Handbook for Tutors*, Palgrave, London, pp. 227-246.

Corresponding author

Shayne D. Baker can be contacted at: shayne.baker@usq.edu.au