23rd **NATIONAL VOCATIONAL EDUCATION AND TRAINING RESEARCH CONFERENCE**

NO FRILLS

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Refereed papers

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NCVER

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About the research

The 23rd National Vocational Education and Training Research Conference 'No Frills': refereed papers

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The 23rd National Vocational Education and Training Research Conference, colloquially known as 'No Frills', was held in July 2014.

Researchers and practitioners from a range of disciplines in the vocational education and training (VET) sector gathered at the conference to share information about key issues confronting the sector. A select few speakers at the conference were also offered the opportunity to have their papers peer-reviewed, and these nine refereed papers have been compiled into this book of conference proceedings.

The papers span a broad range of topics, and include pathways and student mobility between VET and higher education, student aspirations, access to education and training, and issues involved with VET reform.

It is hoped that these papers will provide an insight into the array of topics presented at the No Frills conferences and generate interest in attending future conferences.

Dr Craig Fowler
Managing Director, NCVER

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Introduction

The 23rd National Vocational Education and Training Research Conference was held in Melbourne from 9 to 11 July 2014. This annual conference, colloquially known as 'No Frills', aligns with NCVER's strategic goals of disseminating research to the wider community by bringing together practitioners and researchers, especially early-career vocational education and training (VET) researchers and those new to the VET sector, to share their experience and knowledge. By engaging with the established research community and encouraging industry, policy-makers and training providers to utilise their expertise in the research landscape, the value of research to business and teaching outcomes is demonstrated.

The 2014 conference was co-hosted by the National Centre for Vocational Education Research (NCVER) and Holmesglen Institute, with support from the Australian Department of Education and Training (formerly the Department of Industry). Through informative, relevant and thought-provoking presentations on a wide range of VET-related research in progress, as well as completed work, the conference explored key issues in the VET sector.

The two keynote speakers looked at practical challenges currently facing the VET sector. Steve Sargent, President and Chief Executive Officer of GE Australia and New Zealand and chair of the B20 Human Capital Taskforce, focused on how global trends are affecting industry. With the world becoming more digitised, high-paid, low-skill jobs are being lost, which means that people will require reskilling. In parallel vocational education and training needs to focus more on foundation, rather than job-specific, skills. Steve Sargent's presentation, 'The future of work', also addressed the deliberations of the B20 taskforce and its relationship to Australia's position in the global marketplace. Mark Burford, Executive Director of the Mitchell Institute for Health and Education Policy at Victoria University and our second keynote speaker, shared his experiences working in a policy environment. Through his presentation 'Confessions of a (failed) policy adviser', the importance of and the nexus between a sound idea and the political will to develop and implement good policies were highlighted.

The pre-conference workshops focused on the professional development of researchers and included a number of practical forums on: how to better understand NCVER and the process by which the organisation commissions and manages research; making sense of statistics, a practical guide to using NCVER resources; getting to know LSAY; and the VOCEDplus database.

During the conference presenters touched on a wide variety of issues. These included: partnerships between industry and education to ensure the relevance of skills; experiences of VET practitioners, including student engagement; effects of reforms on enrolments, completions and VET delivery; pathways within the education system and transitions into the workforce; and the value of mentoring and support to students, particularly those who are disadvantaged or transitioning from VET to higher education.

The conference's rich and varied program, during which 49 parallel sessions were presented, was well received, attracting over 200 participants from Australia, East Timor and New Zealand with backgrounds in government, research, industry, training and consultancy. Eight of the 49 presentations were selected for inclusion in this book of conference proceedings. Each of these papers, which were subject to a 'double blind' review process, contributes to policy and practice in the sector.

The papers indicate an increasing interest in the various aspects of VET reform, pathways into vocational education and training as well as the issue of articulation across sectoral boundaries. These themes are complemented by more traditional foci, such as the aspirations of students, access to and returns from education and training, and completion rates.

Kira Clarke's paper on VET in Schools reflects on the challenges constraining meaningful policy change in the area of VET for young people and highlights the impact these challenges are having on the national discussion on strengthening vocational pathways for young Australians. Adding another dimension to discussions of reform, Greg McMillan and his colleagues offer useful insights into issues associated with mergers between TAFE (technical and further education) institutes and higher education institutions through his examination of the merger between Central Queensland University and the Central Queensland Institute of TAFE. His paper identifies the main messages, issues and potential lessons arising from this union.

In another paper Kira Clarke sheds light on the important topic of the role of gender stereotypes in the career choices of youth. The challenges that face young women as they approach important career decisions are examined and recommendations are offered for strengthening models of career exploration for this group of young people.

Pathways and articulation are considered at length in the final four papers of this booklet. Suzanne Storer looks at why successful VET students undertake enabling courses rather than proceeding straight to university, while Damian Oliver and Kurt Walpole examine the divergence between awards and qualifications that has occurred over the past few decades. Student mobility across sectoral boundaries is analysed in the paper by Jillian Blacker and colleagues. In their paper they explore how tertiary admission centres (TACs) in different Australian states and territories function in enabling students to move into higher education upon completion of their VET qualification. Further to the topic of student mobility, Pamela Delly, Anna Brunken and Mike Brown discuss how VET graduates negotiate university and some of the differences these students experience between the two sectors.

Overall, the 2014 No Frills conference highlights that researchers are continuously being challenged to consider how best to meet the current and future skill needs of all Australian businesses. In addressing this challenge, many of the researchers presented here have also considered how theoretical applications translate into policy and practice. These proceedings highlight the importance of ongoing research in sustaining and improving Australia's tertiary education and training system.

The keynote presentations and further information regarding the 'No Frills' 2014 conference can be found at the VOCEDplus website <http://www.voced.edu.au/content/ngv%3A62746>.

Tinkering around the edges, but ignoring the huge cracks: a discussion of VET in Schools for young Australians

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In 2012 the number of 15 to 19-year-olds participating in vocational education and training in Australia exceeded 488 100 (NCVER 2013). This included more than 242 000 students undertaking VET in Schools and more than 147 000 who had left school prior to completing a senior secondary certificate and who were undertaking vocational education at a TAFE institute or a private registered training organisation (RTO) (NCVER 2012a; NCVER 2012b). The VET landscape in which these young people learn is plagued by a lack of clarity, which makes a critical discussion of the role of VET for young people imperative.

In seeking to understand how VET pathways can be strengthened for young people, the broader purposes of our post-compulsory education and training systems should be considered. This discussion crosses policy silos and requires input from stakeholders with often contrasting and competing expectations of the purpose of vocational education for young people.

This paper, focusing on the role of VET in Schools for young Australians, proposes that there are three key challenges constraining productive policy change. Firstly, current discussions of VET for young people are often focused on curriculum alone, with little examination of the role of pedagogy. Secondly, a key issue in the broader discussion of the purposes of VET for young people is what can be described as a 'problematic certificate paradigm'. That is, there is an increasing focus on the attainment of entry-level certificates as the key policy measure of effective youth transitions, despite acknowledgment that these qualifications hold limited value in the labour market. Thirdly, policy discussions too often skirt the class-segmentation role that VET pathways can and do play.

This paper draws on two recently completed studies, one funded by NCVER and the other funded by the Australian Research Council, to highlight the impact that these three challenges are having on the national discussion on how to strengthen vocational pathways for young Australians.

Introduction

VET in Schools is often considered to be accommodated most effectively within the senior secondary certificates; however, in attempting to determine why VET in Schools is not working for some students (Clarke 2012, 2013; Rothman et al. 2011; Queensland Department of Education and Training 2011), its role within the broader purposes of secondary education needs to be considered. This paper draws on two recently completed studies, one funded by NCVER and the other funded by the Australian Research Council, to present a case for how the contribution that Australian senior secondary schools make to human capability for the labour market and to the development of

successful learners and informed citizens could be strengthened (Ministerial Council on Education, Employment, Training and Youth Affairs 2008). This discussion is grounded in an acknowledgment of current weaknesses in national and state-based conceptualisations of senior secondary education (Clarke 2012; Clarke & Volkoff 2012; Clarke & Polesel 2013).

The discussion of VET in Schools in this paper is framed around three key challenges, identified earlier, that are seen to be constraining productive policy change (Clarke 2012, 2013, 2014). Firstly, current discussion of VET for young people is often focused on curriculum alone, with no examination of the role of pedagogy. The second challenge encompasses what can be described as a 'problematic certificate paradigm'; that is, there is an increasing focus on certificate attainment as the key policy measure of effective youth transitions, despite acknowledgment that the predominantly low-level qualifications attained through VET in Schools hold very limited value in the Australian labour market. The third and final challenge discussed in this paper is the class-segmentation role that VET pathways can and do play in secondary schools.

What is VET in Schools?

The research on which this paper is based used a definition of VET in Schools that includes all vocational education undertaken as part of a senior secondary certificate of education; that is, all VET that is used to contribute to the requirements of a school completion certificate. Within this definition there is a great diversity of models of delivery (for example, delivery by schools as registered training organisations, delivery within TAFE institutes and auspiced delivery). While this research focused specifically on the youth age cohort (that is, 15 to 19-year-olds), the definition used for this research was cognisant of the fact that there are some young people undertaking their senior secondary certificates in schools and in adult settings.

The research in this paper draws on literature that has highlighted some commonly held deficit views of VET in Schools (Barnett & Ryan 2005a, 2005b; Dalley-Trim, Alloway & Waller 2008); evidence that VET in Schools often fails to deliver effective pathways into post-school VET or full-time employment (Anlezark, Karmel & Ong 2006; Polesel & Volkoff 2009); the importance of workplace learning and exploration in supporting progression to further study in the field (Smith & Green 2005); and the considerable variation in the extent to which the fields of education undertaken by VET in Schools students align with post-school VET (Anlezark, Karmel & Ong 2006).

Methodology

The research on which this paper draws includes a three-year study of VET in Schools, which involved a series of case studies and two sets of stakeholder roundtables. Participants in the stakeholder roundtables included representatives from departments of education and training, boards of study, industry training and advisory boards (ITABs), industry skill councils (ISCs), TAFE institutes, private registered training organisations, group training organisations (GTOs), Catholic education offices, peak independent school sector organisations and secondary schools. Audio recordings of all roundtable discussions were transcribed and coded using both deductive and inductive coding techniques. This paper also draws on findings from a three-year Australian Research Council Discovery Project, which involved longitudinal tracking of a sample of VET in Schools students in six schools across Victoria, New South Wales and Queensland.

Thinking about curriculum and pedagogy

Emerging from the two pieces of research on VET in Schools is evidence that a productive and meaningful dialogue about future improvement appears hampered by a narrow focus on the curriculum content in VET in Schools programs and a limited discussion of the significance of the learning context, modes of delivery and pedagogy (Clarke 2014). It is important to bring understanding of the contexts of senior secondary learning and the diversity in modes of delivery and pedagogy into this discussion. Substantive and positive change to the efficacy of vocational education for young people in schools is not achievable through changes to curriculum alone. However, within the confines of the traditional academic architecture of Australian senior secondary certificates of education, contexts of learning and pedagogy are not an easy fit.

Australian senior secondary certificates of education such as the Victorian Certificate of Education or the Higher School Certificate were designed initially to support access to higher education (university). With increasing numbers of young Australians remaining at school to follow a range of academic, vocational and employment pathways, demands are now placed on senior secondary certificates of education to provide the foundational learning for a broad range of post-school options, beyond entry to university. One of the key ways in which the Australian senior secondary education landscape has adapted to these diverse needs is through the increasing provision of VET in Schools programs. During the last decade, several of the senior secondary certificates of education in Australia have undergone a process of review and redevelopment, resulting in the incorporation of broader ranges of vocational, employment-based and community learning options. Victoria has gone a step beyond this and has introduced a second school-completion certificate, the Victorian Certificate of Applied Learning (VCAL), by which young people can complete school through predominantly vocational and applied learning curriculum.

The question that arises however is: within this diversifying senior secondary curriculum, are young people being provided with access to meaningful and valuable qualifications in appropriate pedagogical environments? One approach to considering this question is to reflect on the purpose and role of qualifications. If we accept that qualifications have three purposes: to support entry to work and progression to higher levels in work; to enable entry to higher-level qualifications; and to widen access to tertiary education (Gallacher, Ingram & Reeve 2011), then what do we know about the role of VET in Schools in achieving these? There is evidence from studies that track the destinations of school completers in Victoria (Rothman et al. 2011) and Queensland (Queensland Department of Education and Training 2011) that indicates that VET in Schools is playing a limited role in supporting entry to work. Similarly, there is little evidence to suggest that VET in Schools is providing an effective launching pad for school completers to access higher-level qualifications. Post-school tracking surveys in Victoria (Rothman et al. 2011) and Queensland (Queensland Department of Education and Training 2011) reveal that VET in Schools is playing a limited role in widening participation to tertiary education, with VET in Schools students entering university programs at lower rates than their non-VET in Schools peers. Access by VET in Schools students to post-school VET also shows evidence of decline in recent years (Polesel 2008; Rothman et al. 2011).

Our consideration of the question of whether young people are being provided with access to meaningful and valuable qualifications in appropriate pedagogical environments can also be considered within the framework that emerged from the recently cancelled National Trade Cadetships (NTCs; Australian Curriculum Assessment and Reporting Authority n.d.). The framework developed for National Trade Cadetships considered the extent to which vocational curriculum enables learning about, learning for, and learning in, work. *Learning about*, in and for are integral aspects of a

meaningful exploration of an occupation or industry. If we consider current mainstream models of VET in Schools against this framework, a broader understanding of the role of vocational education in schools begins to emerge.

We begin first by considering learning about work. *Learning about* the industry context for a chosen vocational occupation is a crucial aspect of a meaningful exploration of the occupation. VET in Schools curriculum is drawn from training packages that assume employment; in many cases the assumption is that students are employed in the occupational field in which they are training. Therefore, current approaches to VET in Schools contain limited learning about industry. In terms of *learning for work*: in current models of delivery, this could be described as being fairly limited to the development of vocational competencies. However, learning for the industry or occupation ideally includes the attainment of broader applied and disciplinary knowledge that complements and scaffolds those vocational competencies. While there are examples of complementary academic curriculum being used in themed programs of VET in Schools in various locations across Australia, this broader conceptualisation of how young people learn for work is not integral to mainstream VET in Schools models. In terms of *learning in work*: the opportunity to develop and apply vocational competencies in a workplace or industry environment remains limited for many VET in Schools students. By using training packages as the foundation for VET in Schools, the system relies on curriculum that is an occupational standard for entry to work. This is in direct contrast to an acknowledgment that so-called entry-level qualifications do not in fact enable entry to those occupations (Stanwick 2005; North, Ferrier & Long 2010).

In clarifying the role that VET in Schools can play in supporting entry to work, it is important to understand the types of qualifications to which VET in Schools students have access. Based as they are on training packages, VET in Schools programs consist of units of competency that describe specific workplace tasks and responsibilities. Most (92%) of the qualifications completed by VET in Schools students (including school-based apprenticeships and traineeships) are at certificate II (54%) or certificate I (38%) levels. This type of basic VET (certificates I and II) has been shown to be ineffective in providing successful pathways into full-time, sustainable employment (Stanwick 2005; North, Ferrier & Long 2010). This has implications for how the system conceptualises the purpose of VET in Schools. In other words, can VET in Schools be seen as a pathway-to-work program if the qualification levels do not provide access to jobs?

A problematic certificate paradigm

Policy reform of VET in Schools needs to consider not only the purpose of VET in Schools more broadly, but the purpose of qualifications used by VET in Schools programs. What are the most meaningful, appropriate and valuable qualifications we should be offering young people in schools? Findings from the two research projects suggest that greater efficacy of VET in Schools could be achieved through a greater alignment of school vocational curriculum with labour market opportunities. This is not to say that only vocational programs that relate directly to skill shortage areas should be delivered in schools; more that the vocational curriculum in schools, and by extension the vocational qualifications used in schools, should attempt to reflect the broader range of skills and knowledge needed to enter, progress and move through a career path in industry. That is, the vocational qualification with which a young person leaves school should form the foundation not only for their first job but for their ongoing career in their preferred industry. The current narrowly defined occupational focus of VET in Schools qualifications does not achieve this.

The language used within national attainment targets for school completion, which refers to 'Year 12 or equivalent' (Council of Australian Governments Reform Council 2013), complicates understanding at a system and school level of the purpose and value of different qualifications for young people. Some interpretations of this policy were described by stakeholders participating in the two research projects as encouraging a shift towards a 'hidden tracked system'. Stakeholders also expressed concern that Year 12 certificate completion with an Australian Tertiary Admission Rank (ATAR) was being subtly, and in some cases more overtly, positioned against a certificate II vocational qualification as two school completion alternatives. Stakeholders described this comparison as creating a potential space within which schools could formally track students into university and non-university pathways. This is a potentially problematic development. As one school stakeholder described:

> We need to think about the kid and not just what a theoretical employer might want. We are talking about kids, we're talking about school-based programs, which have to have more than just an instrumentalist, vocational purpose, they're also supposed to create citizens, and they're also supposed to create young people who can function as mature members of society, you know, the broader purposes of schooling   (Schools representative)

So, if the key implication of this discussion is the need to ensure that reforms to the VET in Schools curriculum address the need for all students to access foundational disciplinary skills and knowledge to support their careers, how might this challenge be addressed? A new approach must find the balance between the desire for models of vocational education in schools to be 'certified' and the recognition that the entry-level certificates predominantly used in VET in Schools have limited currency. One approach for consideration is redeveloping or reconceptualising all certificates I and II as industry/occupation exploration or 'career start' qualifications for predominant use by young people in schools.

Findings from the two research projects suggest that any redevelopment of this nature needs to consider:

- how to enable, within these entry-level qualifications, exploration of a broader range of related occupations within an industry
- how to integrate meaningful 'learning about' the industry, including understanding issues of mobility, growth and localised issues
- how to create clear, coherent and transparent pathways from these foundational or 'career start' qualifications to intermediate and higher-level qualifications.

VET as an instrument of social segregation

Australian young people participating in VET in Schools tend to be those with lower-than-average achievement and those from low socioeconomic backgrounds (Polesel 2008; Clarke & Volkoff 2012). The informal social streaming role played by VET in Schools is all the more problematic in light of the weak outcomes from VET in Schools discussed above. Meaningful reform of VET in Schools must confront head-on the challenges and needs of the young people pursuing vocational pathways in their final school years. In addition to making these pathways stronger and more meaningful, as discussed above, consideration should also be given to how young people explore and choose these pathways for themselves. Even with changes to entry-level qualifications to ensure their more meaningful and coherent use in schools, the ways in which young people understand their array of vocational pathway choices must be informed and supported by relevant, reliable and timely information (OECD 1997). This is all the more important to those young people with a family background lacking the social

capital or educational experience to provide career guidance support within the home (Bourdieu & Passeron 1990; Majoribanks 2005; Clarke, Savage & St Leger 2011). Stakeholders in the two research projects often called for an integrated approach to career development curriculum, with the aim of facilitating the provision of this type of meaningful and appropriate career guidance for vocational pathways. Furthermore, there was strong support for a more coherent and targeted approach to career exploration starting in early secondary school. This should include learning about the world of work in the middle years and, where appropriate, learning in the world of work in the middle and senior years.

A key challenge for all stakeholders involved in senior secondary education is how to develop and provide high-quality and authentic workplace and career exploration as an embedded and fundamental part of secondary school curriculum. Stakeholders consulted as part of the research have frequently acknowledged that this requires cross-sectoral collaboration at all stages — design, development and delivery. Clearer and more coherent leadership is needed at the system level to support this work, particularly in relation to consistent support for career exploration and workplace learning activities.

Despite significant structural differences in the nature and architecture of the senior secondary certificates in each of the five states participating in this research, there were concerns expressed at every roundtable about the impact of recent and planned changes to the senior secondary certificates. The changes in all the states other than New South Wales were seen as 'opening up' senior secondary certificates of education to include an increasingly diverse range of learners. This breadth of learning was described as necessary to promote retention and to respond to the needs of the diverse cohort of young people now staying on until the final years of secondary education. Greater flexibility within senior secondary education means that Australian secondary students have more choice than ever before in their subjects. However, this opening-up was also described as creating a risk of too much choice and unstructured or incoherent pathways.

Conclusions

VET in Schools can provide a meaningful and valuable pathway between school and higher-level VET or higher education and a foundation for entry to apprenticeships and traineeships in a wide range of trade and non-trade occupations; it can enable access to rich and authentic workplace learning and can help to support students' understanding of the links and synergies between different subjects. VET in Schools can also provide robust and engaging learning experiences, experiences that inform and inspire career aspirations.

VET in Schools has the capacity to do all of these things, and there are best practice examples of this type of VET in Schools around Australia. Unfortunately, this is not the VET in Schools that *all* students experience. Some students participate in programs that do not achieve clearly signposted, effective pathways into higher education, higher-level VET, apprenticeships, traineeships or skilled work. The landscape in which these Australian young people complete their secondary schooling is complex. This paper has attempted to illustrate here key challenges for policy reform in the VET in Schools arena. A deeper consideration of the learning contexts and pedagogy, the nature of the certificates used and the social-segregating role of vocational programs in Australian senior secondary schools are issues that need to be tackled, if meaningful, substantial and effective policy change to VET in Schools is to be achieved.

Acknowledgments

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Comprehensive universities and the role of the national TAFE system: the CQUniversity context

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The role and function of TAFE as the public provider of vocational education and training has continually changed since the 1970s: this has included the introduction of national training packages, the marketisation of the sector, increased accessibility to contestable funds by private registered training organisations, the emergence of dual-sector universities and a plethora of enterprise registered training organisations. The 2013 Parliamentary Inquiry into the Role of the Technical and Further Education System and its Operations provides an opportunity to review and reflect on the role of TAFE institutions. The terms of reference for the inquiry include TAFE's contribution to skills development in underpinning the Australian economy, as well as pathways for access to higher education and employment. Both these domains are of fundamental interest to operations at CQUniversity Australia, which on 1 July 2014, will merge with Central Queensland Institute of TAFE to become Queensland's first dual-sector university. This paper will provide an overview of the key issues raised in submissions to the inquiry, and consider their implications for the CQUniversity context. Specifically, the paper will identify how opportunities for the delivery of services and programs to support regions, communities and disadvantaged individuals in accessing training and skills — and through them a pathway to employment — might be enhanced by the merger. It will also consider the range of challenges facing CQUniversity after the merger, as it attempts to drive local, state and nationally relevant outcomes from a regionally based and 'comprehensive' university base.

Introduction

History of TAFE institutions: 1970s to current

In 1974, the landmark 'Kangan Report' provided the foundation for the Australian technical and further education system — the state-owned and -managed public provider, TAFE. However, the role and structure of TAFE institutions has since changed considerably, most notably with respect to: funding models; increased competition through contestable funding arrangements and significant growth in private registered training organisations; standardisation of qualifications and compliance requirements for registered training organisations; and the emergence of a closer focus on quality (but with an accompanying auditing burden). Key milestones during the past four decades have included:

- In 1992, the Australian National Training Authority (ANTA), the inaugural body for the VET sector including TAFE institutions and private registered training organisations, was established.

- In the mid-1990s, the sector transitioned to the 'open training market' with implementation varying by state; this resulted in TAFE institutions competing against increasingly aggressive

registered training organisations with access to contestable funding from state and the Commonwealth governments.

- In 2011, the Australian Skills Quality Authority (ASQA) became the central registration body for most state-based registered training organisations, including TAFE institutions and all registered training organisations operating across multiple states.

The most recent VET reform process is being driven through the Council of Australian Governments (COAG) Standing Council on Tertiary Education, Skills and Employment. Currently, the Australian VET system has over 5000 institutions, with the great majority represented by private providers and fewer than 100 being TAFE public providers (Wheelahan 2012); however, the latter involves more than 400 campuses and centres throughout Australia (LH Martin Institute 2013). The majority of Australia's 1.8 million VET students now study part-time, with strong over-representation of those from disadvantaged backgrounds (Wheelahan 2012). While TAFE remains the largest VET provider nationally, 'the paradigm shift has been away from "command and control" organised training, and towards a system of individual choice and entitlement' (Australian Council for Private Education and Training 2014, p.3). Funding for VET continues to be complex, not just because it varies by state, but also because there are multiple sources of government funding for different types of students and programs (Wheelahan 2014, p.3).

CQUniversity as Queensland's first dual-sector institution

On 1 July, CQUniversity Australia (CQU[1]) and the Central Queensland Institute of TAFE (CQIT) will merge to form Queensland's first dual-sector institution. This change is made possible by the passage of the TAFE Queensland (Dual Sector Entities) Amendment Bill 2014, and $74 million in Commonwealth structural adjustment funding as well as support from the state. Under the merged model, CQUniversity intends to be a completely 'comprehensive' university, providing students from all backgrounds with access to better education and training pathways, improved facilities and job-placement opportunities, more campus locations, more streamlined articulation into further study, and more study options. Integration of the CQU and CQIT entities will see the university offering over 300 programs from certificate to post-doctoral to an enrolment of approximately 40 000 students; it will also allow the opportunity to provide non-accredited, professional development courses as required by industry or individual organisations.

To provide guidance during the merger process, and to pursue growth of the combined institutions in the future, CQUniversity has developed a VET strategy with the goal of driving a cohesive, agile and comprehensive vocational training environment, which is underpinned by five core elements: vocational training growth; vocational internships; unique VET qualifications and pathways; a one-stop-shop university; and comprehensive university research (CQUniversity 2014a).

Research question

Australian vocational education and training has a long and complex history, and the current raft of sectoral reforms will undoubtedly bring new challenges, as well as new opportunities. This paper examines the current milieu, with the aim of identifying the important implications for CQUniversity's current and future role as a regional and comprehensive university operating within the national and international landscape.

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[1] Previously known as Central Queensland University.

Methodological approach

This paper is based on a content analysis of submissions made to the 2014 Parliamentary Inquiry into the Role of Technical and Further Education System and its Operation, conducted by the House of Representatives Standing Committee on Education and Employment. Each of the submissions was considered using thematic analysis, a method for identifying, analysing and reporting patterns within data (Braun & Clark 2006). In considering the submissions, a series of macrothemes and microthemes were distilled, and each submission was then mapped by stakeholder type and by expression of various theme(s). Periodically, adjustments to macrothemes were made to reflect emerging items or areas where existing themes appeared to coalesce. Where necessary, this included the reassignment of codes for all submissions already analysed. The content analysis was time-constrained, and thus necessarily a high-level exercise. In the case of very lengthy submissions (>50pages), coding was completed largely based on the content of executive summaries. The insights obtained from this exercise were then considered against the current and future operating context for a comprehensive CQUniversity.

Results

At the time of writing, 170[2] unique submissions to the inquiry had been lodged and made publicly available. A breakdown of stakeholder type indicated that almost half were received from individuals, with a further 20% submitted by professional associations and/or unions (table 1). The 'individual' cohort was dominated by two groups — past or present TAFE staff and past or present TAFE students. Of particular note, no submissions have yet been received by standalone registered training organisations.

Table 1 **Composition of stakeholder submissions received to the Parliamentary Inquiry into the Role of TAFE and its Operation**

Stakeholder type	Number of submissions	Proportion of total (%)
Individuals or non-formal groups of individuals	89	52.4
Industry or peak body; professional organisation; membership group or network	25	14.7
Unions and teacher associations	13	7.6
Industry skills council/skills body	10	5.9
TAFE	10	5.9
Government, statutory organisation, board	8	4.7
NFP/charitable	5	2.9
University	3	1.8
Research company/consultants	3	1.8
Planning body	1	0.6
Advisory body	1	0.6
Political party	1	0.6
RTO	0	0.0
Anonymous	1	0.6
TOTAL	**170**	**100.0**

Note: Data reflect public submissions received to 30 April 2014.

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[2] As at 30 May, the Parliamentary website listed 172 submissions; however, this included some duplicates.

Key themes

The terms of reference for the inquiry were arranged under four items:

- the development of skills in the Australian economy
- the provision of pathways for Australians to access employment
- the provision of pathways for Australians to access university education
- the operation of a competitive training market.

Despite most submissions responding explicitly to these terms, these reference items were not necessarily aligned with the themes emerging from the dataset. Rather, the content analysis revealed approximately a dozen macrothemes (table 2), each being comprised of three to ten microthemes.

Not surprisingly, the issue central to most submissions was the overall value of TAFE providers within the broader Australian VET sector. More than half of the submissions containing this macrotheme referred to the significance of access education across the cohorts of adult/second-chance learners, Indigenous, CALD[3], people with disability, women, individuals of low socioeconomic status, youth, and individuals in correctional centres. The remainder were vocal about the value of TAFE in building community capacity, particularly the value of TAFE's wide geographic footprint, given the importance of local delivery in regional, rural and remote Australia. Others stressed the need to recognise and articulate the intrinsic value of TAFE as 'education', with a focus on the social dividend rather than solely on the economic transaction. The characteristics of TAFE (macrotheme #7) also demonstrated strong support for these institutions, with respondents commenting on the strength of the engagement between TAFE and industry and employers, and its value in providing customised and/or niche education. This was echoed in submissions relating to operations and infrastructure (macrotheme #10), which drew attention to the educational as well as social value of TAFE infrastructure, notably libraries and computing facilities.

Table 2 Macrothemes expressed in the stakeholder submissions received to the Parliamentary Inquiry into the Role of TAFE and its Operation

Macrotheme		Number of appearances per macrotheme
1	Value of TAFE providers	214
2	Funding and funding models	209
3	Value of VET Skills	106
4	Competitive training markets and delivery via RTOs	90
5	Staffing at TAFE	88
6	Regulatory framework	54
7	Characteristics of TAFE	48
8	Student-centred concerns	45
9	Other concerns and issues	16
10	TAFE operations & infrastructure	14
11	Linkages between TAFEs and higher education	14
12	Partnerships and collaboration	13
13	International	5

Note: Themes are listed in broader order of importance, based on the number of times recorded across the dataset. A given submission may have included reference to multiple microthemes within a macrotheme; hence, the total number of appearances for some themes exceeds the total number of submissions (170).

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[3] Culturally and linguistically diverse (including migrants, refugees, and non-English speaking backgrounds).

Submissions that referred to the value of 'VET skills' were interpreted as being as qualitatively different from those specifically supporting TAFE-based delivery. Around 50 submissions made mention of the value of vocational training in underpinning economic and industry growth, sustainability and/or productivity, with a further 18 noting the role of VET pathways in the overall education system. However, almost an equal number identified the value of skills in building social capital, community resilience, culture and wellbeing, with jobs being not the only — or even the most important — outcome.

Contention around funding and funding models was a particularly strong macrotheme. Participants called for the restoration of (and/or increase to) TAFE funding, including the need to review base funding arrangements, retain full-service provider funding and provide adequate indexation arrangements. There were strong calls (some 57 submissions) that funding for community access and outreach programs should match their broader community benefit, with many respondents claiming that these services could not (or would not) be adequately provided by registered training organisations. Relatedly, there were concerns that commercially driven cost-reduction strategies would undermine TAFE's social role, resulting in declining quality and service, particularly for pastoral case aspects. Almost 30 submissions referred to the high costs of training in thin markets, accompanied by concerns that boutique courses, or those not valued by the market, would be discontinued: visual arts courses were repeatedly mentioned in this content. These concerns were often compounded by the perception that the metro versus regional cost differential would result in a reduced scope of registration for TAFEs and registered training organisations and less commitment to local delivery. Elsewhere, concerns were focused on the inconsistencies between the TAFE and higher education funding models, including the absence of Commonwealth Supported Places, student loans and the Youth Allowance Relocation scheme.

The macrotheme of competitive training markets largely focused on delivery via registered training organisations. Here, a third of the submissions voiced unease about the variable and/or questionable quality of RTO delivery, especially with the proliferation of 'fast-track' training. This was closely followed by concern about 'cherry picking', with registered training organisations rapidly expanding into areas of low-cost delivery. This was perceived as accentuating the problems of thin markets, the absence of the trades training required by industry and avoidance of regional delivery, with TAFEs left to deliver courses requiring expensive facilities and equipment or longer course duration, despite already struggling to deliver on social obligations.

Issues of TAFE staffing were typically, although not exclusively, raised in submissions from professional associations and unions. The key microthemes included job losses, employment uncertainty, increased casualisation of the workforce and examples of unhealthy workplace culture. There were also calls for a greater commitment to professional development, particularly lifting expectations beyond the Certificate IV in Training and Assessment as a base requirement to enter TAFE teaching. However, this was against a backdrop of some 20 submissions commenting on the highly capable and dedicated nature of many TAFE staff.

In the area of regulatory frameworks, the two strongest microthemes were associated with 'quality' and 'flexibility and innovation'. Over 20 submissions referred to difficulties in defining and measuring quality and the worrying trends towards compliance and efficiency at the expense of quality. The uncertainty linked to rolling reform in the sector and misalignment between state and federal priorities were also raised as issues.

Student-centred concerns were heavily concentrated on the potential for cost-shifting to individuals, higher fees and student debt arrangements, and the implications that these might have for accessibility to training, particularly for disadvantaged groups, with travel costs and declining support services also noted.

Linkages between TAFE institutions and universities were mentioned in fewer than 10% of the submissions; these comprised case study examples of successful TAFE—university partnerships, calls for greater integration of the VET and higher education sectors, and an increase in articulation arrangements. Two submissions specifically identified concerns about TAFE—university competition; yet, three others called for the introduction of polytechnic universities as a new category within the Higher Education Provider Standards, including the potential for a national polytechnic network.

The remaining macrothemes included partnerships and collaboration; international opportunities; and an 'other' grouping, with each appearing in only a small number of submissions. The partnerships theme touched on interactions between TAFE, universities, and registered training organisations, as well as Centrelink and Job Service Providers, in addressing problems of 'wasted' student entitlements or mismatched student training and employment needs. The international theme included the opportunity for growth of TAFE, but also the streamlining of visa processing and post-study work rights for international TAFE students. The most common microtheme in the 'other' category was the need for more data and modelling of labour markets and training outcomes to underpin evidence-based decision-making across the sector.

Discussion

Implications of the inquiry for CQUniversity Australia: tackling issues of 'mission and provision'

CQUniversity aspires to be the most engaged and connected university in Australia and a leader in supporting the development of sustainable communities. The university is closely considering how opportunities for the delivery of services and programs to support regions, communities and disadvantaged individuals in accessing training and skills — and through them a pathway to employment — might be enhanced by the merger. The aim of the merger was to create a comprehensive university with CQUniversity. In this context, the key themes emerging from the parliamentary inquiry provide much food for thought.

The strong concerns about the social dividend of TAFE, particularly the value of local delivery at regional institutions, and the role of full-cost pricing to (a) enable fulfilment of community service obligations and (b) allow TAFEs to compete with private providers on an even playing field (macrothemes #1, #2) have strong parallels with debates in the higher education sector. For example, the Regional Universities Network (RUN) has recently compiled evidence on the overall value of regional universities to their communities, including their often intangible contribution to broader regional development, leadership and community outcomes, using an adaptation of the PASCAL framework. This had led to lobbying for policy that explicitly funds the regional development and innovation activities of regional universities (Regional Universities Network 2013a).

Several submissions highlighted that adequate training was not available in their regions, which presents CQU (and other institutions) with decisions about target locations for expansion. On what criteria might such decisions rest? CQU is already rolling out study hubs to provide a local contact point to complement its distance learning agenda. These facilities encompass infrastructure access, including a student contact officer, computing facilities and access to library resources. A related

question is that of where to concentrate course offerings and course development. Here, it is interesting to reflect that 'some 80% of the activity of TAFE institutes is in areas other than trades training, such as business, community services and hospitality' (LH Martin Institute 2013, p.8). In the comprehensive university context, it is necessary to consider not only market trends in VET training, but also those disciplines with a strong higher education component and which can provide integration with research niche areas, such that forward and reverse pathways as well as research-led teaching can be developed to their full advantage.

Responding to the area of 'quality' (macrothemes #6 and 4), the key interests for teaching and learning development at CQUniversity already include best practice approaches for: distance learning, reducing student attrition, integrating mobile devices and other classroom technologies, inclusivity and authentic assessment.

With respect to the need for more data (macrotheme #9), CQU has lodged its own submission (CQUniversity Australia 2014b) to the inquiry,[4] which strongly recommended building a research agenda into the contemporary TAFE system to ensure that the Council for Australian Governments initiatives are realised across the sector. The submission noted the need to respect TAFE institutions for their potential to conduct research in partnership with business and industry, given their strong track record in engagement. It also acknowledged the need for VET policy to be enhanced and/or substantiated by quality VET research. As the first integration of a TAFE and university for some significant time, the merger of Central Queensland University and the Central Queensland Institute of TAFE provides a 'living' case study for an analysis of many of the key issues raised in submissions to the parliamentary enquiry. The university is also driving a research agenda through the VET strategy, including the appointment of a research leader in the Industry and VET division.

CQUniversity's opportunities and challenges post 1 July 2014

Many of the opportunities and challenges facing CQU after the merger are analogous to those identified for the broader VET sector in the submissions to the inquiry. The key items include:

- Considering the architecture of existing dual-sector institutions, how might CQU develop beyond the notion of a 1+1 model, taking into account both its regional obligations and its national footprint? CQUniversity's post-merger structure has a TAFE Directorate as the regional 'public provider' of VET, situated within the Industry and Vocational Training and Access Education (IVTAE) Division, which has a national VET role: each are key structural approaches to defining CQU as a comprehensive university.

- How can the best aspects of TAFE policy and practice, and the positive regard in which they are held by the community, be put to best advantage under the comprehensive university model? CQU is currently a leading institution for its number of 'first-in-family' enrolments in higher education; the merger will provide even greater capacity for individuals to attend 'university' for the first time. The dynamics and impact of this on the broader regional community will be an interesting variable for the university to understand and manage. The merger also provides an opportunity to leverage the expertise and success of CQIT and CQU to provide a broader range of entry opportunities for disadvantaged individuals, particularly with respect to local Indigenous communities and remote and rural communities.

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[4] The CQUniversity submission does not appear in the content analysis; at time of writing it had been formally receipted by the inquiry but was yet to appear on the website.

- The Central Queensland University VET Strategy provides a broad framework for the future of VET within a comprehensive institution, but does not specifically address a range of post-merger challenges and opportunities. Items of particular consideration include the merits of merging VET qualifications with higher education via an integrated 'School' model; blending the relevant strategies and cultures for industry engagement, research and business development; creating genuine career pathways for current TAFE teachers; and ways to enhance the student experience. There is also a need to identify the balance between delivery efficiency and meeting community expectations, beyond that of pathways and articulations. Significant effort should also be directed to an awareness campaign, both internally and externally, to promote the benefits of the merger.

- More than ever before, return on investment is receiving greater emphasis with respect to government-funded training. CQUniversity has a strong commitment to graduate employment outcomes as a key success indicator, yet the strategic plan of the university is also heavily anchored in industry engagement and benefits to the 'community chest', thus offering strong and diverse dividends on investment from the perspective of the student as well as the government.

- CQU is examining ways to provide a more efficient means of supporting economic and industry growth in the region by developing cross-sectoral use of facilities and resources, as well as by providing more effective means of industry engagement. The aim is for CQU to be seen as a one-stop-solution for the education, training, research and professional development needs of industry.

Broader applications across the education sector

Already, the Council of Australian Governments has affirmed that more Australians need to contribute to, and benefit from, the prosperity of the nation: the increased skills and qualifications levels of individual workers will support Australian businesses and drive improvements in the productivity of the economy while fostering greater levels of workforce participation. The CQIT—CQU merger is not a unique phenomenon: a number of regional dual-sectors already exist in Victoria and the Northern Territory. Notwithstanding this, the analysis of the material from the parliamentary inquiry indicates that the advantage and combined benefits of merging higher education and vocational training institutions are yet to be recognised by many stakeholders.

The inquiry and the structural change occurring in the skills and training sector provide an opportunity for CQUniversity to engage with and influence the broader debate, including issues of:

- the future role and purpose of the TAFE public provider model, with respect to consistency of delivery (especially across regions); acting as a 'safety net' for marginalised product delivery areas; and being the agent by which government can facilitate policy change

- new models for Australian dual-sector institutions, models that define and redefine the concept of a 'comprehensive university'

- the contribution of integrated educational providers to overall regional growth and wellbeing.

The LH Martin Institute (2013, p.5) refers to the need for a system of 'diversity, innovation and choice': Central Queensland University's experiences in the near term will be important in signalling ways to achieve increased diversity, innovation and enhanced individual, employer and industry choice across the sector.

Conclusions

The Australian VET sector has arguably been in a state of turmoil since its inception, with the role of TAFE institutions under constant review and analysis, driven by criticisms of unresponsiveness to industry needs. Uncertainty prevails over policy and structural and funding arrangements, but against this backdrop, the merger of CQIT and CQU provides an opportunity to address the issue of responsiveness in the context of regional VET as well as higher education delivery. The VET strategy developed to guide these two institutions could be regarded as an example of TAFE and VET reform in action and provides a basis from which other institutions might look to take the same journey.

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'That's not a job for a lady': understanding the impact of gender on career exploration activities in schools

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Women in Adult and Vocational Education (WAVE)

This paper draws on a project commissioned by economic Security 4 Women (eS4W) and conducted by Women in Adult and Vocational Education (WAVE). Entitled 'Women and girls into non-traditional occupations and industries: career exploration — options for secondary school students', this research seeks to identify new and effective approaches to encouraging and supporting young women to pursue careers in science, technology, engineering and mathematics (STEM) and non-traditional occupations.

The patterns of participation in STEM and trades-based fields of education and training during school mirror and reinforce the highly gender-segregated nature of the Australian labour force. The foundation for transition from education and training to employment is established during school. It is during these formative years of schooling that young men and women are made aware of what is possible for them and what is not.

This paper draws on a national survey of career exploration practitioners and industry and VET stakeholders to highlight some of the challenges facing approaches to career exploration for young women and ways by which models of career exploration for young women could be strengthened. The key challenges for strengthening career exploration identified by stakeholders include: a lack of access of young women to mentors and successful role models within STEM and non-traditional occupations; training and resources to support the work of career education practitioners in schools; and the complex nature of school—industry relationships.

Introduction

Despite young Australian women out-performing their male peers in many of the key achievement indicators in secondary school, there are far fewer young women than young men entering post-school education and post-school employment in many of the in-demand and high-income fields of science, technology, engineering and mathematics (Rothman et al. 2011; Queensland Department of Education and Training 2011; OECD 2012). Young women are also much less likely than their male peers to enter employment-based training opportunities in traditional trades (Rothman et al. 2011): women comprise 31% of those with university-level STEM qualifications, compared with 12% of those with vocational-level STEM qualifications (ABS 2014a). These anomalies indicate the need for a range of interventions, including in the critical area of career exploration for girls and young women while engaged in

compulsory education. Unfortunately, the gendered stereotypes and perceptions associated with certain career options for young women are still reinforced in schools and create barriers to widening young women's participation in non-traditional areas. Negative experiences and/or perceptions of workplace cultures in industries and occupations with low female participation can discourage young women's participation in associated study pathways in non-traditional careers.

Many of the gendered patterns evident in post-compulsory education and training programs are replicated in the Australian labour force. While women represent almost 46% of Australian employees (ABS 2014b), they account for a far smaller proportion of the labour force in the growth industries of construction (12%), mining (15%) and utilities (23%). In the context of the current skills shortages in Australia, this under-representation of women in these industries is not only bad for gender equality, it also undermines Australia's economy and makes attracting and retaining underutilised sources of talent, including women, essential to economic growth and prosperity (Daley, McGannon & Ginnivan 2012). Recent figures suggest that increasing women's employment rates could boost Australia's GDP by 11% (Broderick 2013).

This paper draws on a recent study conducted by Women in Adult and Vocational Education Inc. (WAVE), which explored current models of career exploration and how they impacted on the related post-school outcomes for women and girls. The research also sought to identify the ways by which new models might be developed to encourage women into these subjects and careers, and in doing so drew on a survey conducted with significant stakeholders across Australia. This study contains case studies of supportive organisations working with young women, and effective models operating in the schools in STEM subjects and courses, and non-traditional occupations and industries.

What is career exploration?

Career exploration is one aspect of a rapidly growing and complex field of practice, increasing in significance globally as well as in Australia (OECD 2004a; Sultana 2008; Hansen 2006, McMahan & Haines 2006). The language used throughout career exploration policy and research varies significantly and is often contested (NZ Ministry of Education 2012; Watts 2002; Hughes et al. 2005). The Australian research literature and policy use the terms 'career advice', 'career guidance', 'career exploration', 'career information' and 'career development', often synonymously. Varied advice, guidance, exploration and information activities are all considered necessary to support and inform effective career development. This conceptualisation sees 'career development' as the complex process of managing life, learning and work over the lifespan (Miles Morgan 2007).

In this paper, the term 'career exploration' was taken to encompass those strategies and approaches used to promote an active engagement with and exploration of career options. The researchers acknowledge that career exploration often includes career advice and/or career information elements, which are more passive approaches in the broader context of career development. For the purpose of this paper, the definition of career exploration is the process of:

▪ learning about yourself and the world of work

▪ identifying and exploring potentially satisfying occupations

▪ developing an effective strategy to realise your goals (University of California, Berkeley 2014).

'Career exploration' and all its elements make up an important part of career development in schools, but are not always effective in enabling young women to access the variety of career options possible. This leads to the risks of a too narrow focus on initial school-to-work transitions, which can

be at the expense of the development of skills and knowledge to support effective lifelong transitions (OECD 2004a, 2004b).

Career exploration can provide benefits at an individual, organisational and societal level. Effective approaches to careers exploration can help people to avoid social exclusion (Cedefop 2010; Hutchinson & Jackson 2007). Strategies and approaches for career exploration can alternatively increase educational engagement and attainment, strengthen pathways for 'at risk' young people, increase self-confidence, improve future awareness and goal orientation, promote greater awareness of the labour market, enhance employment outcomes for school completers, and enable greater labour market flexibility and mobility (OECD 2004a; Miles Morgan 2007).

The Australian Workforce and Productivity Agency (AWPA) in its 2013 National Workforce Development Strategy acknowledged the need for increased career advice for young people conducted by government and schools. The agency highlights the need for a 'national brand for career development advice' (p.13). The Australian Government undertook significant research into career development in the mid-2000s, leading to the publication of the 2008 *Australian blueprint for career development* (Ministerial Council on Education, Employment, Training and Youth Affairs 2008). This report identified 11 career management competencies that individuals need to manage their life, learning and work roles, with learning resources to support them. These include:

- personal management roles in building a positive self-image, interacting with others and growing throughout life
- learning and work exploration, which includes lifelong learning to support career goals, using information and understanding the relationship between work, society and the economy
- career building for work, career-enhancing decisions, balancing life and work roles, and managing the career building process.

Despite the articulation of these competencies within the national blueprint, feedback from schools and stakeholders suggests that the extent to which this policy framework has been adopted in schools is limited (Clarke 2013). The research undertaken by WAVE acknowledges this complex area of career exploration and career development generally and the funding pressures in schools, but focuses particularly on gender and the need to expand the career options of young women.

The challenges facing Australian schools in supporting the career exploration and pathways of young women are not unique to Australia. Despite broader ranges of curriculum and training opportunities in many Organisation for Economic Co-operation and Development (OECD) countries, young women continue to make education and employment choices along traditional and gendered lines (Ofsted 2011a, 2011b; Hutchinson & Jackson 2007). International research shows that across OECD counties, young women are far less likely to pursue post-school study in scientific and technological fields of education (OECD 2012). Some of the key approaches being adopted by governments and education policy—makers across the European Union and the OECD include:

- embedding career guidance within the curriculum (Cedefop 2014). Davies and Cox (2014) recommend a staged embedding of career advice in the curriculum, from a general career exploration module at the start of secondary school, to individualised career support tailored to a pupil's needs in Years 10 and 11
- increasing the use of intermediary organisations in the development and delivery of career exploration activities (Cedefop 2008)

- focusing on the training, skills, qualifications and experience of the practitioners responsible for counselling, guidance and advice to students (Cedefop 2008)
- shifting from a focus on supporting pathways at entry to the labour force to supporting skills for effective navigation of education and employment options over a lifetime (Hansen 2006).

These key approaches are reflective of the outcomes of WAVE's survey and the advice from stakeholders in relation to the crafting of effective models of career exploration and the integration of such options in school curriculum, with support and advice from career professionals.

Career exploration and the Australian senior secondary landscape

Evidence from recent research on senior secondary schooling (Clarke & Polesel 2013; Clarke 2013) suggests that university pathways, perceived as the gold standard and used as a key measure of a school's success, receive the most attention in relation to career exploration and guidance activities in schools. This is representative of the worldwide trend encouraging young women to focus their aspirations on professional occupations, which require university degrees. The increasingly complex senior secondary environment has implications for the nature, effectiveness and quality of career exploration for Australian young people.

VET in Schools is one curriculum approach by which young women in secondary schools might explore different career pathways. But young women make up a small proportion of overall VET in Schools students in STEM and traditional trade areas (see figure 1), particularly in architecture and building (3%), engineering and related technologies (11%) and information technology (30%).

The gendered patterns of participation evident in VET in Schools continue in post-school VET, apprenticeship and higher education courses. Despite a strong policy focus on traditional trade VET and apprenticeships in current approaches to VET in Schools (Clarke 2013), participation data indicate that apprenticeship pathways continue to be relatively weak for young women (Rothman et al. 2011), with only 5% of Victorian young women entering employment-based training pathways, compared with 16.7% of Victorian young men.[5] Female school leavers and school completers aged 15—19 years are less likely to enrol in VET study in the fields of engineering and related studies (7%) and architecture and building (4%) (see figure 2). Female students also make up only a small proportion of Victorian schools completers enrolled in bachelor-level study in electrical and electronic engineering (7.8%), mechanical and industrial engineering (8.6%) and building (8.5%) (Department of Education and Early Childhood Development On Track survey 2013).

What the data in the two figures suggest is that there is an ongoing pattern of gendered educational participation that reinforces gendered occupational outcomes. Earlier work undertaken by WAVE in 2004—05 noted that entrenched social conditioning affects the way girls and young women approach their future career and life choices.

Respondents to this research survey also recognised the need for early interventions at school and specific programs focused on young women to help address the effects of social conditioning. A gender gap has emerged, whereby women with low school achievement obtain casual, part-time and often low-skilled jobs and experience a highly competitive job market, with precarious and/or underemployment (McMillan & Curtis 2008). In this context, effective and coherent approaches to career exploration that

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[5] The Victorian *On Track* survey, conducted annually, is the first and largest survey of school completers. In the absence of national data on post-school transitions, the Victorian tracking data usefully illustrate the gendered patterns of entry to apprenticeships and traineeships.

support pathways to secure and skilled occupations for young women are important, along with the need to focus on a change of culture in perspectives about what is 'women's work' and what is 'men's work'. The impact of career exploration and career development in schools highlights that expanding options for young women is only one part of a 'scenario' for changing these perspectives.

Figure 1   Number of students 15–19 years of age, enrolled in VET in Schools courses, by field of study and gender, 2012

	Management & commerce	Food, hospitality & pesonal services	Society & culture	Engineering & related technologies	Creative arts	Architecture & building	Mixed field programmes	Information technology	Agriculture, environmental & related studies	Health	Natural & physical sciences	Education
Female	34,244	29,811	18,420	3,055	9,582	518	6,877	3,144	3,065	5,467	284	223
Male	24,361	12,703	14,795	25,062	10,473	16,928	9,557	7,173	4,435	1,789	261	28

Source: Vocstats: VET in Schools Students, 2012.

Figure 2   Number of students 15–19 years of age, enrolled in VET courses, by field of study and gender, 2012

	Managemen t & commerce	Food, hospitality & pesonal services	Engineering & related technologies	Society & culture	Architecture & building	Mixed field programmes	Creative arts	Health	Agriculture, environment al & related studies	Information technology	Education	Natural & physical sciences
Female	64,652	57,917	5,712	34,750	1,872	19,678	10,926	12,161	4,693	1,802	2,037	677
Male	31,668	28,293	76,536	18,165	46,826	23,986	10,355	3,458	10,572	9,426	1,395	573

Source: Vocstats: Students and Courses, 2012.

Parents and families are recognised as playing an important role in shaping and informing the career decisions of young women. Parents with entrenched gendered perspectives of occupations themselves were described by respondents as hindering school-based strategies to broaden the interests and pathways of young women. Alternatively, where parents were aware of potential pathways in STEM and traditional trades areas, they were described as being an important and enabling stakeholder in effective strategies.

Respondents to the survey described a need for career exploration approaches to involve parents and families and provide them with opportunities to engage meaningfully with the school.

Methodology

This paper draws from a mixed method study. An electronic literature search and review of international and national sources formed the background to an online survey of stakeholders concerned with career exploration issues. An online survey instrument was circulated nationally to identify key stakeholders and networks.

Feedback through the online survey came from 217 respondents, who represented a broad range of stakeholder types (see figure 3) from across Australia.

Figure 3 Survey respondents, by stakeholder type (%)
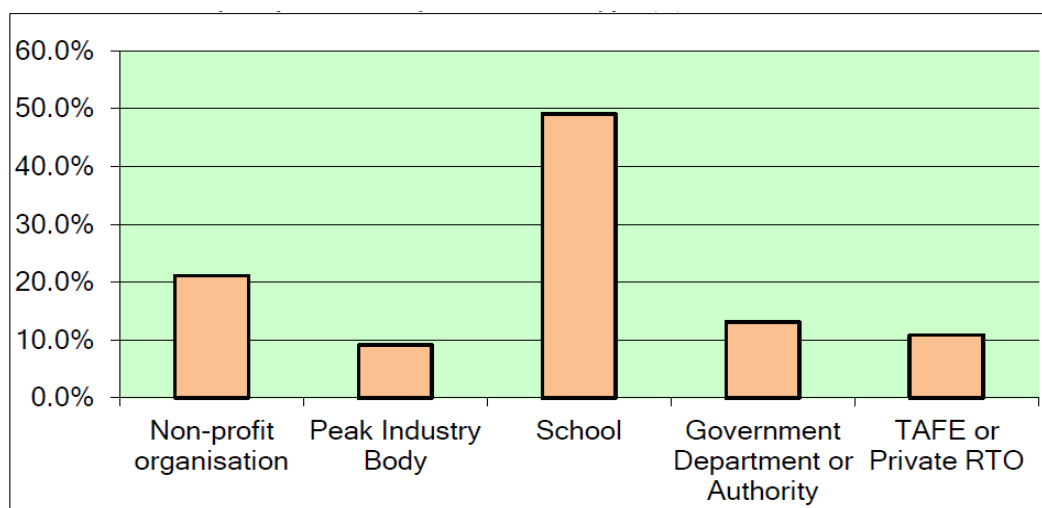
Stakeholder perspectives were gathered from a range of different organisations and stakeholder types. Respondents included career education and career guidance practitioners (n = 56); practitioners and researchers within the higher education and VET sectors (n = 26); VET in Schools and/or pathways coordinators (n = 21); industry representatives (n = 21); representatives from government departments and policy-making authorities (n = 17); school principals and teachers (n = 10); and respondents who were playing a mentoring role for young women in industry (n = 6). This was a fairly representative sample of key stakeholder groups. As is the case with online surveys, individuals and groups forwarded the survey to others, so that an actual response rate is difficult to gauge. The breadth of respondents to the online survey provided insights into the current strengths and weaknesses of career exploration in secondary schools and identified ways by which current approaches could be strengthened. Responses that detailed new and emerging models of career exploration for young women in STEM and non-traditional areas were followed up with telephone or face-to-face interviews.

The survey focused on the following questions and considerations:

- the key strengths of current approaches to career exploration in schools

- what is needed to strengthen these current approaches

- the particular weaknesses in career exploration in relation to young women, including those that may result in gendered outcomes and in relation to their exposure to STEM pathways, including those leading to jobs in non-traditional occupations and industries

- the enablers of successful/effective models of career exploration for young women

- what needs to happen at a policy level to further strengthen school-based models of career exploration for young women

- the enablers of effective partnerships between schools and industry, how they might be strengthened, and in what ways are/can community and non-profit organisations play a role in career exploration programs and services for young women in schools?

Key themes identified by stakeholders

Stakeholders responding to the online survey identified a range of existing constraints to effective career exploration activities for young women and a number of implications for policy-makers hoping to enable and support effective practice in this area. Respondents also identified strategies and approaches effective in widening the participation of young women in STEM and non-traditional areas. The following are the key themes identified.

Constraints to effective career exploration

Gender stereotypes were described by respondents as having a significant impact on the aspirations, pathway choices and career exploration of young women. This gender stereotyping was described as common in advice provided as part of career exploration and development programs. Respondents emphasised the need for careers practitioners to modify advice and information to address any inadvertent reinforcement of social gender stereotypes in schools, particularly those related to specific industries and occupations. Gender stereotyping was described as starting early in childhood, making career exploration that counters this stereotyping an important part of education in primary and secondary schools. Programs that seek to overcome gendered stereotypes of particular industries and occupations were described by respondents as necessary.

In addition to concerns about gender stereotypes, respondents also described existing practices as not effectively responding to and reflecting the interests and needs of young women, but often rather those of the school. This was described as being particularly problematic for young women in regional, rural and remote areas, who often have limited exposure to career exploration opportunities. Effective approaches to ameliorate this issue were those described as focused on being relevant to the self-perceived competencies and aspirations of young women. Respondents commonly endorsed programs that included a self-assessment element, by which young women had an opportunity to reflect on their skills and interests, and match these with career opportunities.

Some of these constraints in relation to student choices of STEM subjects and careers are outlined in figure 4.

Figure 4   Major factors impacting student choice of STEM subjects and careers
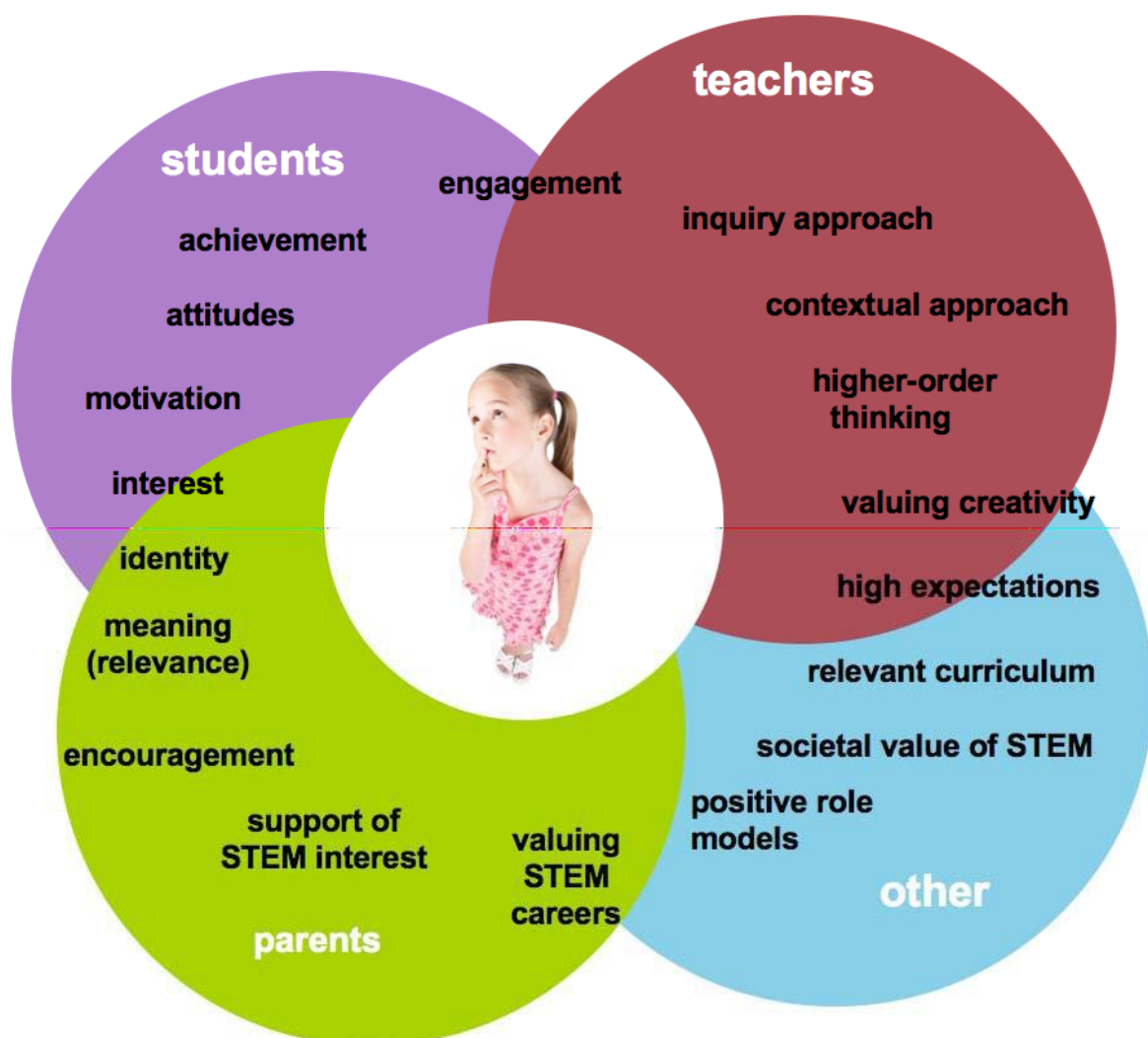
Source: Panizzon & Westfield (2009).

Career exploration strategies that work

In response to the online survey, stakeholders provided detailed information about a range of different strategies and approaches, including identifying role models and mentors as effective enablers of career exploration for young women. Respondents strongly endorsed the benefits of bringing in successful women from STEM and traditional trades to speak to classes and careers days, videos of successful women in resource kits and on websites, and providing access for young women to female-led and female-friendly STEM and traditional trade workplaces. Providing access to 'successful women in non-traditional occupations and allowing them to speak to our young women' was frequently described as a simple yet highly effective approach to breaking down gender stereotypes in career decision-making.

Many of the case studies also highlighted successful programs or examples of where industry could partner with schools to provide opportunities for young women. These included Industry Women Central,[6] Fanelle[7] and SALT,[8] whereby young women could engage with successful female role models.

Taster, work experience and work-placement opportunities were also described as key to supporting young women's active exploration of career options (n = 26). Respondents described a lack of access to learning and work experience opportunities as one of the barriers for young women. Taster opportunities were perceived by respondents as an important chance for young women to 'try before you buy' and were seen as crucial to 'demystifying' some of the gendered perceptions of STEM and traditional trades careers. While work experience and placements were commonly supported by respondents, there was also an emphasis on careful choice of work experience and work placement sites. Respondents described a need for 'female friendly opportunities' to support exploration of STEM and traditional trade roles and occupations. Active experiential learning opportunities, enabled through work placement and through school-based strategies, were identified by respondents as a very important component of effective career development approaches. Prior research has highlighted how students want a variety of experiential opportunities to give them hands-on practical experience and allow them to test different careers ideas (Urbis Pty Ltd 2011).

Survey respondents, particularly those from industry and non-government organisations, emphasised the role that intermediary and community organisations can play in developing and delivering career development in schools. These organisations were seen as particularly relevant to the provision of programs targeted to young women. Outside school organisations were described as effective in providing third-party expertise to support and enhance school knowledge and understanding of different pathways. Davies and Cox (2014) have suggested there are benefits to using existing skills hubs to act as intermediaries for businesses and industries that want to develop relationships with secondary schools.

Respondents to the online survey expressed concern about the accessibility of relevant information to young women and the accessibility of relevant and appropriate information for career guidance practitioners seeking to build and support pathways to STEM and traditional trade occupations for the young women they work with. Partnerships arrangements between schools and community, business and industry stakeholders were identified by respondents as an effective way of promoting and enabling access to the information necessary to inform and support effective career exploration. These types of partnership arrangements were also described as enabling more focused and targeted career planning activities in response to skill shortage needs in local economies.

Implications for policy on career exploration

At a policy level, respondents described the necessity for greater leadership to integrate and embed career exploration curriculum in schools. Explicit integration with what schools teach was required, not just a loose connection, with many expressing the sentiment that there should be a 'highly visible and mandatory career education curriculum'.

The school-wide adoption of personal learning plans for all students and not just those perceived to be struggling was one possible strategy for coherently embedding career exploration in secondary education. This was reflected in one of the successful school case studies.

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[6] <http://www.constructmycareer.com.au/industry-women-central>.
[7] <http://fanelle.com.au/>.
[8] <http://www.saltaustralia.org/>.

The diversity in approaches to career exploration across Australian states and territories was described by stakeholders as complicating the role of schools, and the career development workforce in schools, in addressing the needs of all young people. To address this complex context, respondents called for greater clarity and guidance in relation to school priorities and allocation of funding. Respondents emphasised the need for greater clarity on the best practice approaches and strategies to ameliorate the current gendered post-school study and employment patterns. A number of these have been outlined in this report (school/industry/community partnerships, professionalisation of career guidance, sustainable resourcing, visible role models, and chance to taste careers) and in other relevant research, but appear to not always be accessible to careers advisers. When asked about the type of policy-level changes required to strengthen career exploration for young women, respondents suggested that the coherent and mandated adoption of the Australian blueprint for career development was a possible step that policy-makers could take (Ministerial Council on Education, Employment, Training and Youth Affairs 2008).

Respondents emphasised that career exploration experiences for students should cover a wide range of activities to increase curiosity and awareness of careers, including school talks, WorldSkills, tasters, conference attendance, work experience, visits to local industries and work with local volunteer/community groups. Respondents acknowledged that some schools were offering some of these opportunities; however, there needed to be a prioritising of the provision of effective career exploration opportunities in all schools.

A key criticism of current career development approaches, as identified by respondents, was what many described as the 'add on' nature of strategies, strategies that are separate or abstracted from curriculum. Respondents commonly called for an explicit relationship between career exploration and the mainstream curriculum. One of the challenges was a lack of access to exploration activities that were connected or related to learning and curriculum in the school environment. Respondents described a need for university and industry engagement with schools to widen access to career exploration opportunities and to support effective links.

In facilitating greater links between career exploration and the curriculum, respondents frequently spoke about the need for activities and strategies to be introduced as early as possible in secondary school. Some respondents also suggested a need for a coherent and coordinated approach in the latter years of primary school. This is in line with previous research (Davies & Cox 2014; Cedefop 2014), which has highlighted the importance of early and coherently staged career exploration and development approaches. Staged career exploration, which adopts a cycle of activities that promote an increasing depth and focus of exploration across the secondary school years, was also described by respondents as important in the effective engagement of young women. A staged approach may include initial broad personal reflection on interests and capabilities in primary and early secondary school before progressing to research on related industries and finally taster opportunities in roles and workplaces in a chosen industry in senior secondary school.

A lack of time and resources for career development staff in schools was a further strong and consistent theme identified by respondents. This again reflected the need for greater commitment to funding and leadership. Respondents expressed concerns about the training and qualifications of the career practitioner workforce in schools. The Australian Workplace Productivity Agency (2013) has also noted that career development advice should be delivered by qualified and well-informed career practitioners who are not associated with any particular educational institution. The training and qualifications of career advice practitioners was linked by respondents to the accessibility issue previously mentioned. Again, mandated adoption of the Australian blueprint was considered

important in addressing this issue, with its recognition of the need for specific qualifications for careers advisers and the establishment and maintenance of ongoing professional development. While general career information was seen as useful for young women, it was described by respondents as being insufficient to enable and promote engagement in traditionally male-dominated occupations. Respondents emphasised that effective career information needed to target young women's personal needs and interests.

Conclusions

Despite the plethora of research in Australia relating to the importance to young people of career development and exploration, the majority of this research does not investigate the issue of gender. The findings from this research have highlighted the need for strategies for career exploration and development to be relevant and targeted to the needs of individual students, including young women.

Several implications for the future development of career exploration emerged from the stakeholder feedback in this study. Foremost, there is a clear need for more explicit and coherent leadership to support schools to effectively embed career exploration activities in their curriculum and their career guidance practices. There is also a need for more explicit and more coherent policy on why career exploration is a necessary part of secondary school education, as well as an understanding of which approaches are most effective. The inclusion of coherent and staged career exploration programs in secondary schools should be mandated and have a focus on the opportunities that enable all young women to explore relevant options in a broad range of industries and workplaces.

The career exploration activities of schools can be effectively enhanced and strengthened through partnerships with education and training institutions and industry. Schools alone cannot achieve success in career exploration. Intermediary organisations, including community organisations, partnership brokers and peak industry bodies, have an important role to play in broadening career options for young women. The partnership activities of schools, especially those with industry, are particularly necessary to help overcome gendered stereotypes. However, meaningful and sustainable partnerships are complex to develop and maintain, and schools need support and guidance in how, why, when and where to establish and foster relationships in their communities.

To maximise the benefits of the career exploration opportunities available through these partnerships, young women need access to skilled, qualified and experienced career education practitioners who can provide relevant, accurate and timely information and activities, as described in the Blueprint and by the Australian Workplace Productivity Agency. The work of these practitioners requires sustainable funding and resourcing, particularly in relation to providing access to role models and mentors and low-stakes opportunities for young women to taste and experience non-traditional and STEM roles. While the role that career education practitioners play is a vital one and evidence from this research suggests consideration needs to be given to expanding the role of career exploration in the junior years of secondary school as well, it is often too late to start career exploration in the senior secondary years (Years 10—12) — the foundations of young individuals' career aspirations have already been laid. As identified in the research, staged progress and implementation are necessary, as is government commitment to supporting the programs with sustainable funding.

The research was able to identify successful models of career exploration and partnerships which expanded career options for young women, but also recognised that these were often driven by passionate individuals or organisations. The challenge for policy-makers is to provide the funding,

knowledge and support so that such models can be adopted by all schools and adapted to suit local needs.

Despite the title we have given to this report, young women both deserve and need the opportunity to pursue a wider variety of career paths than is currently the case, and their participation in a wider range of jobs is necessary for Australia's economic growth.

Acknowledgments

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Diploma to degree: why successful VET diploma graduates undertake a university enabling course

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The aim of this paper is to explore the factors that influence VET diploma graduates' decisions to proceed to a degree but undertake a university-based enabling course as part of that journey. The pathway for VET graduates in Australia who wish to undertake higher education studies has been described as a 'crazy pathway' or 'seamless', with some being well documented and advertised, and others unclear and haphazard. Over the past few decades the number of university entrants with a VET qualification has risen significantly. However, even where formal articulation arrangements are in place, the evidence suggests that VET graduates may lack the confidence to move directly from the VET sector into higher education. This is suggested by the enrolment in university-enabling courses by students who have successfully completed a VET diploma. A diversity of factors influences this decision but two stand out as being of importance. One is a lack of confidence by individuals in their ability to move between the two sectors; this is based on their perception of having a gap in their academic literacy skills and their ability to adapt to the different teaching and learning environments. Another is confusion about the process required to move between sectors of education, particularly from VET to higher education.

Introduction

The pathway for VET graduates in Australia who wish to undertake higher education studies has been described as haphazard, a crazy pathway or seamless. Over the decades a number of terms have been used to describe the transition between sectors of education. For example, the term 'pathway' is usually reserved for the broad movement across education sectors, including schools, VET and higher education, whereas, 'credit transfer' is used to describe recognition of previous equal or similar study. Another term commonly used in Australia is 'articulation' and this generally describes a process that enables students to progress from one completed qualification to another with admission and/or credit in a defined pathway. It is often the case that articulation between VET and higher education institutions (universities) is based on local arrangements rather than state or national arrangements. Anecdotal evidence as well as formal research suggests that many factors impact on articulation or credit transfer arrangements. While advancements have been made to ensure 'seamless' movement between differing sectors, there are still significant barriers for students wishing to pursue this pathway, even though various Australian governments have undertaken initiatives to promote student pathways from VET to higher education.

Educational bodies who deliver accredited courses are required by the Australian Qualifications Framework (2011, p.66) to have 'clear, accessible and transparent policies and processes to provide qualifications pathways and credit arrangements for students'. The number of students making the transition from VET to higher education qualifications has increased significantly. According to Watson, Hagel and Chesters (2013, p.10) in '2001, only 12 916 students were admitted to

undergraduate programs on the basis of a VET award, compared with 22 676 in 2010', which represents an increase of 75% in this student cohort. While this proportion has grown, there is an enormous difference in the arrangements for transition. There may be many reasons for these differences: those that are obvious are variations in the policies, procedures and practices of VET providers by comparison with those of higher education institutions, lack of congruence between the vocational disciplines offered by educational providers, lack of will on the part of institutions, and gaps in resources to support the development of transitional pathways. However, even where formal articulation arrangements are in place there is some evidence to suggest VET graduates may lack the confidence to move directly from the VET sector into higher education or may not know about or understand how they can undertake the journey from VET to university. This is partly evidenced by enrolment in university-enabling courses by students who have successfully completed a VET diploma. This has occurred even when there is an established articulation pathway to a degree.

The factors that influence this decision are worthy of research, in that it could add to the body of information that already exists on the topic and may provide direction to policy-makers and practitioners in the development of educational pathways. While there has been significant research into the profile of students making this transition and their pathways (Harris, Rainey & Sumner 2006; Langworthy, Johns & Humphries 2011) there has been little research into the influencing and motivating factors for these students. These factors may include the VET environment from which they are making the transition, as the environment in which VET qualifications are gained has changed significantly, with an ever-increasing emphasis on job-specific skills. This may mean students do not recognise the transferable educational skills they hold, such as critical thinking and academic writing. In addition to the differing educational environment of VET and higher education, other factors may include a lack of exposure to role models who have successfully made the transition, or personal factors, such as the length of time between VET qualification completion and going to university.

This small study will consider the research already undertaken into the factors that generally influence students' decisions on articulating from a VET qualification to higher education, but it will focus on any unique features that influence students' decisions to undertake a university-based enabling courses as part of that transition. A review of the literature revealed two important themes relevant to this study. Firstly, the terminology used to describe the movement of students between sectors of education or a qualification varies. Secondly, the variety of pathways available to students is broad and diverse, which may present problems for students wishing to make this transition. However, missing from the literature was any in-depth exploration of the factors that influence students' decisions to pursue a pathway from VET to higher education, specifically those that influence students who choose a pathway utilising a university-enabling course. This paper will consider the influencing factors at a very micro level: the result of interviews with five students who have undertaken a specific university-enabling course. These students were invited to take part in the research, based on their capacity to provide data relevant to the research question. They met the criteria of having successfully completed a VET diploma course and were eligible for direct entry to a university course but had decided to undertake a university-enabling course first. The interviews were conversational and asked students to describe their journey throughout VET and onto higher education, with an emphasis on the factors that influenced their choices along the way.

Findings and discussion

A review of the existing research found that there are many paths available to prospective students if they wish to undertake trans-sector study. While educational institutions must be cognisant of the

Australian Government policy (Australian Qualifications Framework Council 2013) that requires attention to ease of transition; that is, clear pathways for students who want to pursue this avenue, there are vast differences and inconsistencies in the choices available. Watson, Hagel and Chesters (2013, p.33) state that 'while all Australian universities have policies to promote VET to higher education pathways, there are subtle differences in the way in which pathways policies are implemented'. It could be argued the differences are more than subtle, as there are many models, including arrangements where institutions in different sectors have made provision to share campuses and facilities. Examples of these are the former Frankston College of Technical and Further Education (TAFE) and Monash University with the Diploma of Business offered as a shared course with direct entry to a degree on successful completion, or Goulburn Ovens TAFE with arrangements between it and La Trobe University for nursing studies. Other arrangements in place at different institutions to allow transition are formal memorandums of understanding or informal credit transfer pathways, whereby staff of two or more institutions have created a credit transfer process. However, Walls and Pardy (2010, p.25) maintain 'the formal structuring of articulation between VET and higher education occurs on a spectrum ranging from well-organised to haphazard'. Of particular interest to this study (with the establishment of a dual-sector university in CQUniversity) are the models created by the dual-sector universities, which have developed pathways between VET and higher education qualifications. Swinburne University of Technology provides an example of this, having developed a number of pathways specifically for successful VET students with guaranteed entry for business, ICT and science diploma graduates into a range of business, ICT and science degrees.

While there are many models available to students considering making the transition from VET to higher education, there has been considerable concern expressed by writers such as McKenzie (2001) and Golding and Eedle (2001) in relation to the difficulties that students undertaking this path may encounter and the gap between rhetoric and reality when looking at education pathways. The ability to move between sectors has been under discussion for decades but the terminology has not been consistent (Hass 1999). The term 'credit transfer' is frequently used in relation to the transition from VET to higher education, particularly when describing recognition of specific courses already undertaken. 'Articulation' is also a commonly used term for describing the process by which educational institutions match their courses to those at other institution. Nevertheless, these terms are often used synonymously (Ministerial Council on Education, Employment, Training and Youth Affairs 2006). In addition, a broader and equally common term is that of 'pathway'. However, this term more commonly embraces not only the transition from VET to university but also the transition from school to VET. According to McKenzie and Hillman (2001) the term 'pathway' began to be widely used in Australia with the publication in 1991 of the *Young people's participation in education and training*, colloquially called the Finn Review. It has been used extensively since then both as a term and also as a descriptor of policy.

Interviews with the students elicited a number of factors that had influenced their decisions to undertake a university-enabling course and some of these were foreshadowed by the literature reviewed. The initial impetus for undertaking the enabling course, as described by the interviewees, related to long-term goals such as the wish for a higher education qualification, with the possible subsequent benefits of a better job and salary and the desire to attain more knowledge in their field. Undertaking an enabling course ensured that they could confidently achieve this goal. The specific factors influencing their decision to undertake an enabling course related to: confusion caused by the terminology used by educational sectors to describe movement between different sectors; the availability of relevant information and advice from course advisors; the time elapsed since completion of a previous qualification; and perceived gaps in educational ability, such as academic

literacy and understanding of assessment methods. Table 1 represents responses for each identified factor from five interviewees.

Table 1   Factors influencing students' decisions to undertake an enabling course

Factor	Number
Confused by terminology	3/5
Difficulty in finding relevant pathway information	3/5
Time gap between qualifications	1/5
Counselled to complete STEPS*	2/5
Literacy confidence	5/5
Sector differences; especially assessment	5/5

* STEPS = Skills for Tertiary Education Preparatory Studies.

When the interviewees were questioned in depth about their rationale or reasons for undertaking an enabling course, many common factors were identified. Because the number of interviewees is very small, a wider study could be usefully undertaken to determine whether this is consistent with students engaged in a wider range of enabling courses.

For all interviewees the two main reasons given for undertaking the course was a lack of confidence in their academic literacy and their ability to complete assessment tasks. As indicated by table 1, all students identified these as influencing factors. This is consistent with the research of White (2014) and Watson, Hagel and Chesters (2013), who found that those wishing to make the transition from VET to higher education are likely to face many and varied challenges. The differences between the sectors, which were identified as being challenging, are the competency-based approach used in VET compared with the more traditional curricula emphasis of universities. According to Keating (2008, p.5), 'VET is concerned with the human capital needs of competencies and applied skills, while higher education attends to the social and cultural needs of knowledge mastery and conceptual understandings'. This means that students who make the transition between the sectors have to adjust to different teaching and learning philosophies and specifically to methods of assessment. The responses from the students interviewed for this study were consistent with established research, in that they also identified that the different teaching and learning environments in VET and higher education may create challenges, perceived or real, for students in adapting to the requirements of the different sectors. This raises questions about the compatibility of the requirements of the different sectors, which may be related to the expected outcomes of the qualification. Vocational and educational qualifications generally focus on industry-established competency standards, while universities commonly wish to retain the major influence on the content of their courses.

The second most common factors identified by students in this study were confusion caused by the terms used in the sectors to describe transitional arrangements and the difficulties faced in obtaining information about established arrangements and possibilities. They described encountering terms such as 'credit transfer', 'recognition of prior learning' and 'articulation' without really having a clear understanding of their meaning or application. This finding is probably not unexpected, given that earlier research has found that a variety of arrangements exist and that the terms are often used interchangeably, when in fact they are describing different concepts or procedures. This indicates that attention could be given to the terminology used when communicating with students about pathways in education in Australia. Whether the issue is that the terms are being used synonymously when they should not be, or that the terms are being applied correctly but are unfamiliar to students, is an area that requires further clarification. Another factor identified as influencing students'

decisions was that they had been counselled by higher education course advisors to complete an enabling course prior to undertaking a degree or consecutively with a degree. The interviewees were unable to provide an explanation for the basis for this advice but had made the assumption that they lacked academic skills. This assumption may be flawed, but as it has been identified as an influencing factor it would be valuable to explore the rationale underpinning this advice. A final factor identified by one interviewee was the time gap between completion of a VET qualification and undertaking higher education. While this interviewee also identified a lack of confidence in their academic ability, they were not able to definitively state the factors were linked.

Conclusions

There are a number of conclusions that could be drawn from this research. Firstly, successful VET graduates face challenges, either real or perceived, when moving to the higher education sector to complete a qualification, particularly in relation to their literacy and their ability to successfully adapt to a different teaching and learning environment. Secondly, the terminology used to describe the transition arrangements between education sectors and a variety of practices may be contributing factors to students' understanding of the process and, therefore, their ability to take advantage of possible progression through sectors. Thirdly, advice from faculty advisors in the higher education sector is influential in determining whether students include an enabling course in their journey from VET to higher education. Finally, a time gap between the completion of a VET qualification and undertaking higher education can also be a contributing factor in this decision. Overall, it has been possible to identify very clear factors that influence VET students' decisions to undertake an enabling course as part of their journey to higher education.

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Tick TAC: the role of tertiary admissions centres in VET to university pathways

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The recent NCVER research report *A half-open door*: *pathways for VET award holders into Australian universities* confirms that 'university policies and practices appear to influence the rate at which institutions admit students on the basis of a VET award' (Watson, Hagel & Chesters 2013, p.2). The authors of this paper will explore how the subtle differences between universities' implementation of policies in promoting student pathways may be also influenced by the operations of state tertiary admissions centres (TACs). This paper will explore how the TACs in different Australian states and territories function in enabling students to move into higher education on completion of their vocational education qualification. It will examine whether operational differences are apparent across state and territory jurisdictions and to what extent, therefore, these may contribute to a variation in the numbers of students articulating from VET to university. Particular attention will be paid to TAC offerings that couple a diploma and degree in a selectable study pathway at the point of application for a place in the tertiary education sector. Such an offering clearly shows both guaranteed entry into a university as well as academic credit in a single study preference. The authors, from the VET and higher education sectors, will draw on findings from the national Integrated Articulation and Credit Transfer project, their extensive practice in establishing articulation pathways, as well as the results of a series of NCVER Student Outcomes reports.

Introduction

If we look at the process of applying for admission to an Australian university from the point of view of potential students, it is clear that one of the first institutions with which they must likely engage is a state or territory's tertiary admissions centre (or equivalent). These organisations have been set up with the express purpose of processing applications for a place in a university course. In some instances, tertiary admissions centres can also process applications for entry into VET diplomas and advanced diplomas. The authors contend therefore that any discussion of the accessibility and effectiveness of articulation pathways from VET to higher education must include some examination of how TACs operate. The authors assert that tertiary admissions centres, rarely mentioned in the national VET to higher education pathways discussion, are crucial to the development of cross-sectoral pathways and, more importantly, have the capacity and the resources to facilitate them.

Background

For almost 30 years tertiary education providers have been exploring how to effectively implement articulation and credit transfer pathways between the VET and higher education sectors. PhillipsKPA (2006, p.54) recognised that there have been many barriers that impede the development of these pathways, including issues relating to access and equity, efficiency and views about the roles of the different sectors and therefore how best to create pathways between them. While these issues seemingly only relate to traditional VET to higher education articulation pathways, they are equally prevalent in dual-sector organisations and impede articulation from VET to higher education within the same organisation (Milne, Keating & Holden 2006; Paez & Blacker 2012).

The *Review of Australian higher education* (Bradley Review) called for 'urgent and substantial structural change' to address the barriers (2008, p.1). Subsequently other significant pieces of work were undertaken in this area to investigate the barriers to effective articulation pathways and strategies to overcome them. These include the Integrated Articulation and Credit Transfer project[9], which was funded by the federal government (2009—11), the strengthening of the Australian Qualifications Framework (AQF) (specifically the Pathways Policy; 2011) and more recently the Watson, Hagel and Chesters report (2013). As a result of this work, new and innovative models of articulation and credit transfer have evolved.

Types of pathways

Traditional articulation and credit transfer arrangements have been based on end-on enrolment, whereby a student completes their VET qualification (diploma or higher) and then investigates opportunities for higher education study. The student applies to a university usually through a tertiary admissions centre and then, if admitted, explores the possibility of credit, which may or may not have been negotiated beforehand on their behalf.

These pathways have been extended into other models such as concurrent enrolment in both a VET and higher education course as well as direct-entry pathways, whereby, on completion of their VET qualification (diploma or higher), the student applies directly to a given university for entry with credit. This pathway, negotiated and agreed to by the university and registered training organisation, deliberately removes the requirement to apply for university entry via a TAC, the aim being to reduce the barriers to transition from one sector to another.

Such pathways have been further refined to incorporate dual-award pathway arrangements, on offer in Queensland since 1996 and more recently available in South Australia, since 2013 (A Toohey pers. comm. with P Hillman, 8 August 2014). In this model the student applies to an admissions centre for a study program that incorporates both a diploma (or higher) and a degree. The student applies for both qualifications at the outset of their tertiary studies and on completion of the VET qualification articulates directly into their guaranteed place in the degree with predetermined credit.

Figure 1 illustrates how a dual award is offered to applicants by Queensland Tertiary Admissions Centre.

It is important to note that the traditional/existing models of articulation and credit transfer remain valid options, but the pathway model, which is the central focus of this paper, is the dual award.

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[9] A collaborative project conducted by the University of Southern Queensland, Department of Education and Training (TAFE Qld), Careers Australia Group and the Australian Council for Private Education and Training.

Figure 1   Example of QTAC dual-award pathway

QTAC Course Search

Close & Return to QTAC Site

QTAC

Southbank Institute of Technology

Diploma of Accounting/Bachelor of Business or Bachelor of Business Administration or Bachelor of Commerce

QTAC Code and Campus	Course Fee	Duration	Sem 1 2012 OP/Rank	Sem 1 2013 OP/Rank	Start Month	Major Offer Round
155757 Southbank/University of Southern Queensland[r]	PGF /$3000[g]	$3^{1/2}$F	New Course	u/u	Jan 2014 Jul 2014	16 Jan 2014 5 Jun 2014
155758 Southbank/University of Southern Queensland[r]	fee /$11775[g]	$3^{1/2}$F	New Course	u/u	Jan 2014 Jul 2014	16 Jan 2014 5 Jun 2014
Prerequisites: Completion of Year 12 or attained Year 12 leaving age						
Primary fields: B or C **Secondary fields:** n/a						
How to apply: Apply through QTAC.						
Additional entry information: Applicants with completed study in this field may not be eligible for this course. Contact (07) 3259 4586 to clarify eligibility. University admissions policies may apply.						

[r] Students undertake initial study at Southbank Institute of Technology and complete the degree at the relevant university. Articulation pathway may depend on electives, specialisations, campus, mode of study, and semester intakes of articulating university. Please check with the relevant university.

[g] This price is the minimum program tuition fee for this qualification. Programs also attract additional material and administration costs. VET FEE-HELP may be available to eligible applicants for study at some certificate IV, diploma and advanced diploma level. Some diploma and advanced diploma programs will also have certificate level study as a requirement. This will attract additional costs. The VET FEE-HELP payment option is not available for the required level certificate study and upfront fees will apply. Applicants should contact the relevant institute for details. For combined diploma/degree courses, refer to entry under university for bachelor component.

[u] All qualified applicants were offered a place.

Source: Extract from Queensland Tertiary Admissions Centre website <www.qtac.edu.au>.

Findings and discussion

Methodology

The authors commenced this research with a general understanding that dual awards had been successful at Southbank Institute of Technology (SBIT) in Queensland. This prompted the following research questions:

- What is the empirical evidence that shows this pathway model is successful?

- Are dual awards as successful at other Queensland tertiary education providers?

- Are dual awards offered in other states?

  - If so, are as they as successful as they have been in Queensland?

  - If not, can/should they be implemented in other states?

- Do the tertiary admissions centres (or equivalent) in other states have the capability to enable dual-award pathways and to contribute more broadly to cross sectoral articulation?

Two case studies were undertaken: one investigated the recent NCVER Student Outcomes report for Southbank Institute of Technology graduates; and the second explored the enrolment trends in a particular diploma cohort over seven years. Finally, a desktop scan was undertaken to explore the roles of tertiary admissions centres in different jurisdictions, as described by the centres themselves. It was important for the authors to acknowledge what tertiary admissions centres do and to house this information in one place.

Case studies

NCVER 2013 student outcomes: Southbank Institute of Technology

Table 1 shows that 23% of Southbank Institute of Technology graduates in 2012 and 19% of SBIT graduates in 2013 moved into university study. While the 2013 figure is lower, it is still significantly higher than the overall number of graduates from all VET providers in Australia who went on to higher education (8%). Given that dual-award pathways only existed in Queensland — and mostly at Southbank Institute of Technology — during the years preceding this report, it would suggest that dual awards have a positive influence on the number of VET to higher education articulators. The downturn in Southbank Institute of Technology's 2013 numbers could be attributed to a reduction in pathway programs due to the restructuring at that time of several diplomas and their related articulation arrangements.

Table 1   Extract from key findings for SBIT graduates, 2012 and 2013 (%)

Further study outcomes	Southbank Institute		2013			
After training (as at 31 May 2013)	2012	2013	TAFE Qld	TAFE Australia	All VET providers Qld	All VET providers Australia
Enrolled in further study after training (%)	41.8	42.8	32.3	36.1	30.2	34.6
Studying at university (%)	22.6	18.7	8.8	8.2	6.7	8.0

Source: NCVER Student Outcomes, 2013; SBIT: TAFE institute report.

Southbank Institute of Technology: Diploma of Laboratory Technology case study

The ability of dual-award pathways to attract prospective students to a cross-sectoral program of study is illustrated by the case of the SBIT Diploma of Laboratory Technology students described below. For these students, Southbank Institute of Technology offers a suite of dual-award pathways which provide both vocational qualifications as well as access to additional study options. Since 2007, when science dual awards were introduced, total enrolments into the diploma have trended higher. Beginning with 70 students in 2007 and peaking at 98 students in 2012, the vast majority of students entered the program via the Queensland Tertiary Admissions Centre (QTAC; Poole & Toohey 2007; 2014 SBIT class surveys and enrolment information). The proportion of students enrolling in dual awards sits at around 55% of the total cohort, with the Queensland University of Technology (QUT) articulation by far the most popular university pathway (representing over 90% of all dual-award enrolments). When dual-award students were surveyed in 2007, nearly one-third of respondents stated they would not have enrolled in any SBIT laboratory technology program if the dual award had not been an option. Furthermore, one-fifth stated they may not have enrolled at SBIT at all if there had been no dual award. These trends were consistent over the period from 2007 to 2013. Due to program restructuring, an updated dual-award agreement was not signed with the Queensland University of Technology in 2013, meaning there was no pathway listed in the 2014 QTAC Guide. In 2014, enrolments into the Laboratory Technology program declined by over 40% from the peak enrolment, to 52 students, with only 18% of all diploma students enrolled in a dual-award pathway (see table 2). Importantly, the absolute numbers of students enrolling in dual awards with other universities remained steady. It is proposed that the lack of a dual-award agreement with Queensland University of Technology in 2013 was significant in this decline in student enrolments in 2014.

Acknowledging the importance of information in determining student higher education choices, students in the 2014 group were surveyed to investigate the extent of their awareness of further higher education study options, and the survey results were compared with historical data. Awareness was much higher in the earlier groups (up to 95% in 2007 compared with 50% in 2014 (in weeks 3 and 2 of semester respectively), see table 3.

Furthermore, when students were asked if they were considering further study, only 37% of the 2014 students responded positively compared with 80% for the historical group. Recognising this deficit in awareness within the 2014 group, an information campaign was implemented. When the 2014 cohort was subsequently surveyed in week 8, the degree of awareness had increased to about 65% of the cohort but fewer than two-thirds of these students stated that they would consider further university study (compared with 80% for the historical cohort). This investigation suggests that the 2014 student cohort displays different characteristics in terms of aspirations to complete further study. In 2007 Poole and Toohey found that, as a cohort, dual-award students demonstrate distinct characteristics, those that are supportive of academic achievement, including higher levels of engagement and greater motivation for subsequent study. These data may suggest that the 2014 cohort is under-represented in terms of students presenting with these characteristics.

This case study indicates that the profile of a dual-award pathway enabled through QTAC may be associated not only with increased student enrolment, but with a student cohort that demonstrates higher levels of engagement and greater aspirations for subsequent study.

Table 2 Enrolment status for students 2007 and 2014

Year	Cohort size	Enrolment status	% of cohort
2007	70	Dual award	55%
		Non-dual award	45%
2014	52	Dual award	18%
		Non-dual award	82%

Sources: Poole & Toohey (2007); 2014 SBIT class surveys and enrolment information.

Table 3   Student awareness and consideration of subsequent university study

Year	Awareness of uni. options (Week 3 for 2007, week 2 for 2014)	Consider uni. study (Week 3 for 2007, week 2 for 2014)	Awareness of uni. options (Week 8)	Consider uni. study (Week 18 for 2007, week 8 for 2014)
2007	95%	80%	≥ 95%	69% 49 students
2014	51%	37%	67%	42% 21 students

Sources: Poole & Toohey (2007); 2014 SBIT class surveys and enrolment information.

University of Southern Queensland dual-award data

Further investigation found that student enrolments via dual-award pathways trended upwards over time when viewed from the perspective of a higher education provider such as the University of Southern Queensland (USQ) (see table 4). In other words, the movement of students across the sectors is also visible at the destination organisation, which is able to track and plan for the arrival of students in the dual-award pipeline.

Table 4   Student enrolments via QTAC dual awards across University of Southern Queensland study areas

Year	Arts	Business	Engineering	Education	Science	Grand total
2010	0	29	0	0	0	
2011	15	52	21	30	36	
2012	81	83	24	134	165	
2013	96	99	98	173	205	
Total	**192**	**263**	**143**	**337**	**406**	**1341**

Source: University of Southern Queensland's Australian Tertiary Education Participation Network Project.

TAFE South Australia dual-award data

Finally, when dual-award pathways were made available to potential applicants in South Australia in 2013, through the South Australian Tertiary Admissions Centre (SATAC), demand was very strong. This trend is also reflected in the 2014 Semester 1 data (see table 5). The popularity of dual awards therefore appears evident across state jurisdictions.

Table 5   TAFE South Australia dual award applications

Year	Number of dual awards	First preference applications	Offers made to dual award programs	Enrolments in dual awards	Page views on TAFE SA dual award related pages
2013 (S1/S2)	41	636	511	283	93 727
2014 (S1 only)	37	478	345	N/A	24 908

Source: TAFE SA Higher Education Services.

The roles and jurisdictions of Australian tertiary admissions centres

Given the success of dual-award pathways, as indicated by the data above, it was necessary to investigate the roles of tertiary admissions centres in other states and to establish whether they also have the capability to facilitate cross-sectoral articulation such as through the creation of dual-award offerings. While the authors acknowledge that university policy is clearly instrumental in facilitating the movement of students between sectors, as comprehensively documented in the NCVER research report, *A half-open door* (Watson, Hagel & Chesters 2013), the evidence of the success of dual awards indicates that other systems can play an equally valuable role in enabling student mobility across the sectors. The section below explores the TAC factor in further detail.

Most tertiary education providers across Australia utilise the services of tertiary admissions centres; however, the roles of these centres differ from state to state. Some of the centres focus only on university entry, while others process applications for VET providers and universities; of those that process VET applications, some are limited to diplomas and advanced diplomas, while others will deal with qualifications at all levels.

The Queensland Tertiary Admissions Centre processes applications for undergraduate university programs and diploma and advanced diploma qualifications for many VET providers in Queensland, as well as some education providers in northern New South Wales and the Australian Maritime College in Tasmania (Queensland Tertiary Admissions Centre 2014). On behalf of universities, QTAC applies a series of schedules to diploma and advanced diploma holders, such that these applicants will receive a minimum QTAC Selection Rank of 82 and 91 respectively (where 99 is the highest rank). Since the mid-1990s, the Queensland Tertiary Admissions Centre has been able to process dual-award

applications for participating Queensland universities and TAFE Queensland; these pathways are included in the annual QTAC Guide.

The South Australian Tertiary Admissions Centre is responsible for processing applications for courses with TAFE SA, Flinders University, the University of South Australia and the University of Adelaide, as well as Charles Darwin University in the Northern Territory. SATAC manages applications for certificate I courses through to postgraduate-level university courses (South Australian Tertiary Admissions Centre 2014). In 2013, dual awards were introduced in South Australia and SATAC processed these applications. There are currently 37 dual-award pathways available through SATAC, and although these are predominantly with TAFE SA and Flinders University there is a small number offered with the University of Adelaide (South Australian Tertiary Admissions Centre 2014). These and other pathways to university are promoted on the centre's website.

The Tertiary Institutions Admissions Centre (TISC) is the Western Australian version of a tertiary admissions centre and only processes applications for university programs at Edith Cowan University, Curtin University, Murdoch University and the University of Western Australia (Tertiary Institutions Admissions Centre 2014). A separate entity processes TAFE applications in Western Australia — the TAFE Admissions Centre. This centre processes applications for full-time state-funded places across all levels of study from certificate I to advanced diploma (J Blacker pers. comm. with M Poepjes, 1 May 2014).

The University Admissions Centre (UAC) processes applications for undergraduate and postgraduate programs at universities in New South Wales and the Australian Capital Territory (University Admissions Centre 2014). While UAC calculates the Australian Tertiary Admission Rank for school leavers, it does not calculate equivalencies for relevant VET qualifications and this information needs to be sourced from individual VET and higher education providers such as Southern Cross University (SCU), which publishes the ATARs for a range of VET qualifications on its website.

The Victorian Tertiary Admissions Centre (VTAC) administers entry to courses from certificate II to masters at universities, TAFE institutions and independent colleges in Victoria (Victorian Tertiary Admissions Centre 2014). Like its counterpart in New South Wales, the Victorian Tertiary Admissions Centre does not calculate ATARs or Tertiary Selection Ranks or equivalencies for TAFE qualifications. This information needs to be sourced from individual institutions. Pathways into university courses are promoted on the VTAC website.

Scope of Australian TACs in cross-sectoral pathways

While these tertiary admissions centres are designed to centralise the receipt and processing of applications, it is interesting to note that their roles vary significantly from state to state. There appears to be a consistent approach to the way that TACs either process applications or develop VET to university pathways at a national level. However, as articulation agreements become more commonplace and education providers seek to be innovative in an ever-changing and competitive market, there may be an opportunity for TACs to play an enhanced role in this area. The development and implementation of dual awards, for example, seems an obvious choice, especially when considered in the context of the Bradley Review (2008) and the findings of the Phillips KPA *Credit where credit is due* (2006) report, both of which both advocate for seamless, transparent pathways from VET to higher education.

The transparency that dual-award pathways provide for students is significant: students are able to make a commitment from the outset of their studies to undertake a VET qualification as well as a

university degree while having assurances about meeting university entry requirements. In addition, such pathways enable universities to undertake forward-planning exercises: they can assess and prepare for this pipeline of students from the VET sector (Southbank Institute of Technology 2010). Currently, only Queensland and South Australia facilitate dual awards but there is scope for the development of these pathways across the country.

In states such as Tasmania, where there is no tertiary admissions centre, the highly cooperative relationship between TASTAFE and the University of Tasmania allows for the development of dual-award pathways or similar, especially given that the University of Tasmania already has links with QTAC through the Australian Maritime College. In Western Australia, there are two distinct entities that process VET and higher education applications; however, a good working relationship is maintained. The timely transfer of information from one organisation to the other aids decision-making processes and helps to foster collaboration between the two sectors (J Blacker pers. comm. with M Poepjes, 1 May 2014). While the development of articulation arrangements is still largely individualised, there is an opportunity to develop dual-award pathways, given that the two admission organisations already work closely together.

Another prime example is Charles Darwin University, which, as a dual-sector organisation, enables students to undertake both VET and higher education qualifications (2014). Given that applications to Charles Darwin University are processed by SATAC, an entity which already administers dual awards for South Australian universities, CDU is well positioned to implement dual awards. Dual-sector organisations exist or are being developed in most Australian states, which again supports the implementation of these types of pathways at a national level. Utilising dual-award pathways in such organisations will help to facilitate seamless transition between the two elements of the organisation, a situation that is currently very limited.

Education providers with strong links to industry, such as CDU and USQ, are able to maximise opportunities for students by providing cross-sectoral articulation pathways. The combination of skills and knowledge from both VET and higher education that are central to articulation arrangements makes graduates from these qualifications very highly employable (Paez et al. 2011b).

Finally, the scan of the different tertiary admissions centre functions also revealed that some act as a centralised repository of the ATAR scores used by different universities within the jurisdiction. Importantly, these TACs coordinate the issuing of the ATARs conferred upon a VET award holder by participating universities. Having this valuable information available in a central location enables applicants, particularly those who have graduated from VET sector, to make informed decisions about the further study opportunities available to them at each university and removes the need to source information about university entry from the individual institutions.

Conclusions

The evidence presented in this paper suggests that all state and territory tertiary admissions centres (or equivalent) have the capacity to play a significant role in enhancing the effectiveness of VET to university pathways. Understandably, a credit transfer arrangement needs to balance the sometimes competing demands of optimal academic progression with appropriate recognition of the learning gained by obtaining a VET qualification. However, once this has been achieved, it is clear that benefits flow from tertiary admissions centres being able to package up and offer articulation arrangements in a dual-award model. The example of the difference in enrolment numbers when a particular science dual-award pathway was exceptionally not offered in 2014 points to the powerful

impact that these have on the broad project of improving articulation from VET to higher education. It is evident that, where tertiary admissions centres can offer such an opportunity, the number of pathway students increase: potential students are able to see the benefits of gaining an industry-recognised VET qualification alongside a more theoretical university degree. Furthermore, graduates with complementary qualifications from both sectors bring a broad range of skill sets to the workforce, which are sought after by employers and industries (Paez et al. 2011a). The Queensland and South Australian experiences show that tertiary admissions centres have a critical role to play in facilitating these cross-sectoral pathways and possess the capacity and resources to do so.

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VET credit transferees enrolling directly into the second year of university

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This paper discusses the experiences of VET students who gained credit for their previous VET studies and have articulated directly into the second year of undergraduate programs. It presents evidence on how these VET credit transferees (VCTs) negotiate university and on their expectations of courses, which were reported as vastly different from their experiences in the VET sector. Based on a qualitative analysis of individual interviews with students, and in contrast to their previous experiences of learning within a VET environment, the students in this study report that the higher education learning environment seems less willing, or able, to address the unique transition needs of these students. The consequence of this has been various levels of engagement and disengagement within higher education, with a new barrier to 'seamless' transition identified.

Introduction

The aim of this paper is to examine the experience of VET credit transferees (who gain credit for their VET studies) and enrol in the second year of bachelor degree programs. However, by receiving credit these VET graduates miss out on the transitional first year programs that are commonly being put in place for new students entering university. These first year programs provide clarity around expectations of university courses, as they provide in-depth engagement with threshold concepts (Meyer & Land 2006). These threshold concepts are likened to 'conceptual gateways' (Meyer & Land 2005, p.373), which lead students into the new patterns of thought and understanding that are fundamental to study within a discipline. Examples of threshold concepts might be, 'precedent in Law, depreciation in Accounting' (Meyer & Land 2005, p.374) or pedagogy in education. Further to this, first year programs also explicitly address what it means to be analytical and critical, as well as teach a wide range of academic study skills (James, Krause & Jennings 2010). The VET graduates in this paper, as VET credit transferees, miss these important foundations to their studies.

This paper examines different aspects of the student experience of articulation from the VET sector to higher education. The evidence discussed is derived from interviews with a total of 21 higher education students who received credit for their VET studies and were subsequently enrolled directly into the second year of a bachelor degree program. All of the students who participated in this research articulated from TAFE institutes. The context for the study is the development of socially inclusive growth in the Australian tertiary education sector; that is, to seek greater egalitarianism in the system and the potential this may have for considerations on the pathway from VET into higher education. This is occurring at a time when there has also been movement away from an elite system of higher education towards a mass system of higher education, and the possibility of universal access

to higher education (Trow 2006). Significantly, Watson, Hagel and Chesters (2013) reiterate that the national rate of articulation from VET into higher education is around 10%. However, this is not uniform, with some elite universities taking closer to 1%, while some regional universities take 26%. They show that around one-third of Australian universities take about two-thirds of the total number of VET credit transferees. The studies by Abbott-Chapman (2006, 2011) show that VCTs succeed at around the same rate as those who come to higher education after Year 12. The VET credit transferees who are the focus of this study are just one group within these broader statistics. Given the wide differences in numbers of VET credit transferees entering various higher education institutes, and the different pathways they take, it is important to examine the experiences of these students.

Laanan (2001) explains that one of the experiences of such students is transfer shock. This is where students experience a decline or temporary dip in their academic performance as a result of articulation across different learning environments. A number of studies report that initially VET credit transferees (VCTs) experience a great deal of stress, particularly in their first year, until they get a realistic sense of the workload, learn to study strategically and learn to balance work and study. Catterall and Davis (2012) have noted student difficulties with registering for tutorials, understanding assessment tasks, writing in appropriate academic styles, incorporating academic conventions and coping with online learning environments.

Mills, McLaughlin and Carnegie (2013) analysed articulation from VET to higher education in the construction industry. They identified five features that enabled successful transition: the sustained interventions by people, particularly VET teachers; the engagement of learners through supportive learning experiences in VET, which encouraged ongoing learning; building the confidence and motivation of learners through their experiences in VET programs; the recognition by universities of the value of VET learning; and the collaboration and deep communication between VET and university providers (p.6). They also showed how programs designed in a dual-sector university could provide learning experiences that drew on the strengths of both sectors.

Studying in the higher education sector is commonly understood as focusing on the abstract and dealing with the complexity of ideas inherent in academic work, along with its requirement for 'deep learning' (Biggs 2011). This is seen to be quite different from VET, where the educational focus is on a 'more applied approach' (Goozee 2001, p.9) and appears to be one of the reasons for some of the problems and/or stress that students experience coming from the competency-based VET system. An important concept related to understanding the student experience of VET credit transferees is levels of engagement. This has been defined by O'Donnell et al. (2012, p.433) as referring to, 'the behavioural intensity, emotional quality and personal investment in a student's involvement during a learning activity'. In contrast, Krause (2005) defines disengagement as 'students who do not actively pursue opportunities to engage in their learning'. It is 'an active detachment'. These two concepts are used in this paper to investigate an aspect of the student experience of the different learning environments.

The findings and discussion below are presented in two sections. The first section is derived from interviews with 11 VCTs attending a single-sector university, one which provides most of its education in higher education. These students came from many different TAFE institutes into one of two courses at a single-sector suburban university. The second shorter section explains what appear to be atypical results in the context of a dual-sector university, in which both vocational education and higher education are delivered in the one university.

Findings and discussion

Experiences in the single-sector university

The eleven students who enrolled directly into the second year of a three-year program were undertaking either a Bachelor of Business or a Bachelor of Nursing (Division 2 conversion) at the single-sector university. These students revealed varying degrees of both engagement and disengagement. Two features that appear to strongly influence engagement and/or disengagement for these participants are their previous experience of studying in VET and their development of academic skills.

VET experiences and higher education

The eleven participants came from seven different TAFE institutes, both metropolitan and regional. When asked whether they felt VET had prepared them for study at higher education, all reported that in terms of content they felt VET had prepared them. All four of the nursing students believed the nursing skills they had acquired in VET were much stronger than those of their peers, who had completed first year of the degree program. This reflects and reinforces that the main intended purpose of all VET programs is the achievement of what is considered competency in the workplace.

Different learning environments

The participants in this study report that the learning environments in VET and those at the university are different and this influenced their engagement. Many participants in this study reported that they enjoyed their VET studies, with many citing the smaller cohorts and teaching staff as contributing to this. One student commented that VET classes were, 'intimate-like … we could talk about anything … related to the subject'. In contrast, she felt that at university, 'you don't really get to talk much'. She also reported this was a significant problem for her and had contributed to her disengagement: she was 'not really enjoying [university studies] that much'.

Three participants likened their studies at VET to being at high school, referring to the daily compulsory attendance, the small class sizes, being with the same group for all subjects, having the same teachers and developing a study routine. One student was certain that the routines learnt at VET had prepared her for the challenges of university. Other students discussed the more supportive environments provided by VET, where, 'they would show you exactly what to do', which was reinforced by another participant who believed that in VET, 'we were a little-bit more spoon fed'. These students valued this, as these levels of support facilitated their understanding of the task and what was expected. At VET too, because of the smaller classes and fewer teachers, two participants noted that students who were struggling with their studies were more easily identified and then supported. They contrasted this to university, where if a student was experiencing difficulties, they were largely left to manage on their own, 'there's not a lot of help given'. One student cynically noted, 'the only support I got … was when I was enrolling'. All participants indicated that they overcame their struggles generally on their own. However, some students took a pragmatic view of this, suggesting that they understood the difficulties in providing the same levels of support and attention they had received in VET, given the larger numbers of students: 'You've got to understand that you've got thousands of students … there's often two co-ordinators for one subject'. Another interviewee believed the onus was on the student, 'you really have to step up, there's lots more responsibility'. She suggested that the student becomes accountable.

Another issue identified by the VCTs was that they felt their lecturers and tutors did not know that they had not completed first year and that this created problems for them. One student expressed a

desire for more 'compassion' from her university lecturers for the students who had not completed first year. The lecturers' assumptions that the second year cohort all had the same first year educational experience was also raised by other participants as a problem. One student observed, 'they just expect you to have that knowledge and background [from first year]', and so her marks started 'slipping', because she did not have the necessary academic skills to adequately cope with the expectations and the quality of work required in the second year of the university program.

Teachers in VET

Of the 11 participants, three believed that they were well prepared for university as a direct result of one or two of their VET teachers. One nursing student was receiving high grades in higher education and did not experience a drop in her Grade Point Average (GPA). She mentioned two VET teachers who 'drummed in' what would be expected of them in higher education. She remembers one teacher saying, 'This [VET course] is a pathway [into higher education], you don't just give an opinion without evidence'. Consequently, she was more aware than other VCTs she had spoken to of the different academic expectations between VET and higher education and she felt that, without these VET teachers, she would have 'struggled'. Another student also identified one teacher who not only motivated him but who also provided advice about higher education and what to expect academically, as the VET teacher had followed and experienced the same pathway as this student.

Preparation for higher education

One of the business students stated that in her first year of university (but the second year of her undergraduate program) she did not study for exams because she was already confident in the material, as she had learnt it all previously at TAFE. Two other students believed that VET provided them with strong foundational knowledge, which they were then able to build on when they came to university. All of the nursing participants were proud of their nursing knowledge and skills. Three participants specifically mentioned their knowledge of anatomy and physiology as being stronger than their peers, with one being 'shocked' by the limited knowledge of their peers who had completed the first year of the higher education program. These three also mentioned that their knowledge and skills were recognised and utilised by their workshop facilitators at higher education, where the VCTs were called upon to assist in teaching basic nursing skills to others in their class.

Academic skills

In contrast to the occupational practice and knowledge, all of the VCTs felt that VET had not prepared them in terms of the academic skills they needed at university. Skills such as essay and report writing, referencing conventions, and research skills were not a strength developed through VET studies. For most of the participants, the area of academic skills contributed to periods of disengagement, where they struggled to understand academic expectations and master the academic requirements. During these periods of disengagement the students attempted to find ways by which to cope with their skills gap; that is, they were less able to engage with their studies because they were preoccupied with learning the academic skills underpinning their assessment tasks. However, once they had improved these skills, most were able to more successfully engage with their studies.

All of the participants indicated that, when they entered higher education, their research skills were poor to non-existent. While they all understood the importance of research skills, they reported difficulties in knowing how to develop these. Some reported difficulties using the databases to find journal articles because they had little experience of this in VET, while one participant complained that, 'even borrowing a book was a lot more difficult than I thought'. A more commonly reported problem was that they had been able to use fewer academic sources in their VET assessments and so

there was a significant gap in their understanding of what would be required in higher education. One student who was about to enter the final year of her degree could not understand why she had to use references at all, claiming that, 'I feel like my opinion, because it's my essay … my opinion matters more'. Based on this, she appears to still be some way off from understanding the academic and scholarly culture of higher education.

During the periods where participants reported they were struggling with not really understanding what the assessment tasks required or how they would complete longer essays or where they should find academic resources, their sense of bewilderment was apparent. Early in her studies (Semester 1 of Year 2), a nursing student describes 'just going through the motions, trying to piece together and work out how I was meant to set my day out, how I was meant to understand assignments, how I was meant to understand even the workshops or labs, and what we were meant to read'.

Another problem noted by participants was that they had limited opportunities in VET to write extended essays, with most in VET being under 500 words. Coming to university and having to complete written assessments of 1000 words or more became highly problematic for a number of participants. One student's reaction was, 'going from 200 words to one thousand word essays, your brain just freaks out!' This particular student was so overwhelmed by her academic skills gap, and the subsequent and significant drop in her grades, that after completing one semester of second year she made the decision to enrol in first year in order to complete the introductory subjects she had bypassed. As a consequence, her marks improved and she reported 'loving' her studies at university. Another participant also recognised her academic skills gap, but she had no idea where she might find support. She reported not only feeling frustrated at times, and despite 'learning stuff I didn't know [which was] good … I just feel really lost sometimes'. Two students reported temporary disengagement until they found ways to develop their academic skills. The skills they developed included finding relevant academic texts, referencing correctly and writing an evidence-based academic essay. The students developed these skills by managing alone, as well as relying on their peers for information and support. Once they were able to develop these skills, they could then focus their attention on discipline content rather than being preoccupied with learning the skills needed to successfully complete assessment tasks. This was not the case with the third student, who had completed second year and still felt disengaged. It is unclear why this particular student seemed to remain disengaged; however, she was younger than the other participants and appeared to have few peer networks. So maturity and lack of support may have been issues contributing to her disengagement.

Signing up for more

All but one of the students said they had enjoyed or were enjoying their studies. Of the 11 participants, four have gone on to undertake postgraduate studies. It seems that the levels of engagement of the participants in this single-sector example can be in part attributed to the academic skills they either possessed or needed to develop when they entered higher education. When the students report that they have the relevant academic skills to complete their assessment tasks successfully, it would appear that their engagement is stronger. Without these skills, the students indicate struggling with many aspects of their studies, including understanding tasks, lecturer expectations and referencing conventions; finding relevant academic resources; determining the appropriate formats for assessments; and coming to terms with the lack of support.

Dual-sector experiences: atypical experiences?

This section of the paper provides a snapshot of the transition experiences offered to VCTs in one department that spanned across the two sectors of this dual-sector university. Ten students agreed to

be interviewed to explain their experiences of learning in higher education. Eight of the ten students stated that they did not find higher education course work difficult. All the VCTs were passing. In fact, all these students described the work in higher education as easy, repetitive and unchallenging. This may be an example of what is described as the opposite phenomena to transfer shock, called transfer ecstasy (Lanaan 2000), although it might also be labelled as 'transfer apathy'.

Further to this, these ten students note they feel totally safe and comfortable, and there is little sense of their feeling anxiety and/or worry about work requirements or passing. In fact many of these students reported being bored with their higher education studies. All offer this as the reason for a notable disengagement with their work and the university as a whole. These students blame poor-quality teaching and repetitive curriculum for their boredom

These students do not perceive higher education teachers as being anywhere near as good as their previous TAFE counterparts, which may explain some of the reactions to higher education these students have. In a further contrast to higher education, all these students in the dual-sector university speak of the VET experience as transformational. They speak about their VET teachers in glowing terms and their learning in TAFE as providing them with a passion for the industry and the work.

One student spoke of being:

> totally motivated by TAFE staff that made sure they knew you as a person, who created high
> expectations for you, so I got high distinctions … [They] worked with you to guide you into your
> future career … I liked the way of teaching in TAFE.

A second student continued:

> TAFE prepared me so I didn't need help … VET built up my confidence definitely. They praised you
> and they believed in you. If you wanted to go in and talk to them they were always there.

Consequently, the movement into the new, higher education learning environment for these students can be seen to create a significant emotional reaction, one where the issue appears not to be one of coping with higher, more abstract, levels of learning as previous studies suggest. Instead, it appears their difficulties arose from the perception that there was no one to help them when they were experiencing difficulties.

A number of these students repeated their perception that the teachers in higher education 'just don't care; we are just a number'. It could be argued that these students may be misconstruing the lack of individualised attention as a sign of poor teaching. Perhaps too these students had not adequately become acculturated to the different learning environment in higher education, where little individual attention is provided by lecturers and tutors. This limited attention may in fact be an essential element in creating independent learners in preparation for professional-level work in an educational system that has to cater for much larger student cohorts.

Conclusions

This paper has provided insight into some of the experiences of the VET credit transferees who enrolled directly into the second year of a three-year higher education program. One dataset was derived from 11 students in a single-sector university, while the other came from ten students participating in a degree program in a dual-sector university. Many of the students in the single-sector university seemed to experience periods of both engagement and disengagement. The disengagement of the single-sector students appears to be related to the level of academic skills such as essay writing and their understanding of referencing conventions when they entered higher education, and to

adjusting to the different learning environment. Early in their higher education courses, the VET credit transferees' academic study skills were limited, because they reported that VET did not prepare them in this regard and as a result, some disengagement is evident. However, as they improved their academic skills, they became more engaged in their studies.

The common themes emerging from both learning environments are that students are reporting that VET prepared them in terms of the foundational knowledge in their disciplines. In addition, most reported that the learning environments in VET were more supportive. Unfortunately for the dual-sector students, when they entered higher education they no longer felt challenged by their studies as they believed them to be repetitious and with little individual attention provided by their teachers. On the other hand, the single-sector students reported that their foundational knowledge was strong and their occupational practice was an area where they were able to exhibit expertise. The single-sector students did report some difficulties adjusting to the different learning environment in higher education, although most were able to do this. It is evident from these examples that the experiences of VCTs vary, and both single-sector and dual-sector universities have some way to go in improving the experiences of both cohorts. From this evidence, the student learning experience in VET appears to mirror 'noone gets left behind'. Importantly, these students reported that a contributing factor in this is the individual attention, support and encouragement provided by their TAFE teachers, who clearly articulated their expectations. On the other hand, the learning experience in higher education appears to take the form of 'now you're on your own, sink or swim', whereby lecturers take limited responsibility for the learning experiences of their students.

Acknowledgments

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A 'road map' to completion: the architecture and negotiation of apprenticeship training plans

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This research examines explicit and implicit understandings of the training plan in apprenticeship contracts, and the potential impact of mismatched expectations on completion rates. In order to examine the effects of mismatched understandings, a small research enquiry of four case studies was conducted with participants from the food trades industries. Apprentices, employers, and trainers were all interviewed for their knowledge and understandings of the apprenticeship training agreement or training plan. The research findings show that the apprentices had poorly informed understandings of both the explicit conditions for training set out in their training plan and the implied understandings associated with the training between the three signatory parties. These misunderstandings resulted in three of the four participants considering leaving their apprenticeships.

Introduction

In this research paper the term 'apprentice' covers both apprentices and trainees. Their training is conducted within an employment-based training arrangement, whereby the apprentice receives training instruction from their employer and a registered training organisation.

A recurrent theme in the literature reviewed for this research is the role that training plays in an apprentice or trainee's decision to withdraw from their training contract (Commonwealth of Australia 2011; Curtin University, Centre for Labour Market Research 2007; Smith, Walker & Brennan Kemmis 2011). Industry groups, government, and educationists all acknowledge training's importance in an apprentice or trainee's decision to stay or leave (Strickland et al. 2001; Commonwealth of Australia 2011; Chan 2011). Many reasons for non-completion are listed in the Commonwealth of Australia's comprehensive report, *A shared responsibility* (2011); however, of note in this influential report's findings is the lack of knowledge that apprentices, employers, and trainers have about their training responsibilities. It has been this lack of knowledge of training commitments in the various apprenticeship participants that has provided the framework for the research question in this paper: are broken training expectations and understandings contributing to higher non-completion rates within the food trades?

Literature and background

For most of the twentieth century the completion rates for traditional apprenticeships have been in the 80—90% range (Stromback 2006). Interestingly, in the last 30 years those rates have declined to a figure of 55.4% in 2011 (Knight 2012; NCVER 2011), with some areas such as food trades experiencing completion rates as low as 38.7% (NCVER 2011). In the Australian Government report into apprenticeships for the twenty-first century (2011), this was highlighted as 'unacceptably low' (p.9),

with the authors identifying training as an area for improvement if completion rates are to rise, while the Victorian Government Auditor-General's report (2014) also identified apprenticeship training as an area of concern. Importantly, the Auditor-General identified the role that employers play in apprenticeship, by providing on-the-job training, and the exposure required for an apprentice to receive the range of work experience necessary to complete their qualification (p.24). In this area of supporting and developing the skills of apprentices, the authors found that not all employers were 'fit and proper' (p.18), and recommended that the Victorian Registration and Qualifications Authority (VRQA) 'develop a robust employer approval process' (2014, p.18). This view echoes the findings of the Commonwealth of Australia's report that 'a fundamental element of an apprenticeship or traineeship is the employment relationship, underpinned by a training contract and quality training' (2011, p.11). This concern for the propriety of employers as workplace trainers and skill developers has also been identified in the sphere of educational researchers such as Fuller and Unwin (2013), who argue that employers are responsible for creating 'expansive' or 'restrictive' workplaces. Here the authors paint a vivid picture of 'expansive' workplaces, which promote the status of apprentice as both learner and employee engaging in a gradual and educationally rich transition towards expertise and tradesperson status in contrast to 'restrictive' workplaces, where the status of employee dominates over learner, and apprentices are treated as an extra set of hands who require only limited knowledge and skills for specific tasks (Fuller & Unwin 2013).

In Strickland et al. (2001) these views are extended to include technical trades teachers. The authors call for 'quality interactions and interpersonal relationships' (Strickland et al. 2001, p.26) between apprentices, employers and trainers from registered training organisations to ensure that workplace training is delivered to a high standard. This concept of increased cooperation is further reinforced in overseas literature by Chan (2011), identifying that 'all three parties are required to work together to ensure shared understandings about expectations, roles, and responsibilities'(p.15).This emphasis of the crucial involvement of all parties in training in workplace learning is similarly enforced in the work of other workplace learning theorists such as Billett (2004), Illeris (2011), and Beckett and Hager (2002). Central to their research on workplace learning are two common ideas: that learning is a social process taking place 'between' people and not only 'in' people, and, secondly, that an appropriate culture of learning, training and a supportive environment, are important for learning to take place effectively. Smith, Walker and Brennan Kemmis (2011) further the argument for shared understandings in the workplace and identify the role that mismatched expectations of a workplace and of the apprenticeship participants has in leading to apprentice disengagement. In this study the authors examine the implicit and explicit understandings of an apprenticeship agreement created at the outset of an apprenticeship. Here the authors identify explicit promises as those that refer to pay rates, conditions, and industrial awards, whereas implicit understandings are identified as those that are unstated and generally inferred through conversation, actions, and unspoken understandings.

In this research paper we have sought to extend this line of examination to the understanding that the three parties have about training commitments. We focused on the training plan as a means to investigate the implicit and explicit understandings created around apprenticeship training. The training plan is a document that is 'signed on' at the beginning of the trade commencement, and then 'signed off' once the apprentice is deemed to have completed their training (Commonwealth of Australia 2011). It is referred to in this report as a 'road map', due to its linear progression towards the destination of completion. The *Education and Training Reform Act 2006* requires employers, trainers and apprentices to comply with training contracts and training plans (Victorian Government Auditor-General 2014), and as such it is considered an important legal document. The document works to encapsulate the contractual commitments of all three parties to the training process, from the

start of the apprenticeship until completion (Commonwealth of Australia 2011; Victorian Department of Education and Early Childhood Development 2014; Victorian Registration and Qualifications Authority 2014). In creating a training plan, the apprentice, employer, and the representative from the registered training organisation all discuss and negotiate the methods of training delivery and assessment. Time lines for the delivery of curricular activities, as well as theoretical knowledge and practical training delivery, are negotiated by the parties. The trainer initially constructs the document but is required to include the other parties in the negotiation of its contents (Victorian Department of Education and Early Childhood Development 2014; Victorian Registration and Qualifications Authority 2014). The employer, for their part, is required to make a commitment to the structured training of apprentices, with allocated time set aside in the workplace for scheduled training. The input of the apprentice is essential, especially in relation to consultation over assessment and curriculum delivery methods. Importantly for the apprentice, once all the training competencies have been met, they are then entitled to complete their apprenticeship under the rules of 'competency based completion', which allows for the provision of the early completion of their apprenticeship (Commonwealth of Australia 2011; Victorian Department of Education and Early Childhood Development 2014; Victorian Registration and Qualifications Authority 2014). In their large and influential inquiry into apprenticeship training models in 2001, Strickland et al. recommended the stricter implementation of training plans as a means of ensuring higher-quality training and learning outcomes in apprenticeship training (Strickland et al. 2001). The researchers posited that training plans could facilitate increased communication between parties, especially in the areas of training and assessment. The researchers further recommended that training plans provide greater opportunity for apprentices to have increased input into the training and assessment process.

Research methods

Four case studies formed the basis of this research, which used a parallel mixed-methods research design (Mertens 2005) and incorporated the use of semi-structured interviews and Likert scale surveys. The surveys were administered to the three key participant groups — apprentice, employer, and trainer — as a means of measuring their explicit and implicit understandings of the apprenticeship arrangement. Their purpose was to examine training and analyse understandings of training responsibility and expectations. These understandings were triangulated for comparative inferences in the 'findings and discussions' section. The questions covered the issues given below:

- that the apprentice should have time set aside for scheduled and specific training within the workplace by the company tradespeople (explicit requirement within the training plan)

- that the employer should expose the apprentice to different training/learning experiences while they are in their employment (potential implied understanding harboured by an apprentice)

- that the apprentice should be released from the apprenticeship early if they achieve the competency-based completion requirements (explicit understanding within the training plan)

- that the apprentice should not be trained by other apprentices (potential implied understanding harboured by an apprentice).

Qualitative data were collected through semi-structured interviews with the apprentices. Their purpose was to obtain clearer understandings of apprentices' experiences of apprenticeships, focusing particularly on their implicit understandings. Both pragmatist and interpretivist (Mertens 2005) approaches have been utilised in the collection, collation and analysis of the paper's research and its findings.

Each participant group was comprised of an apprentice, their employer, and their trainer. All three within the group were signatories to an individual apprenticeship training contract. They were initially approached randomly through an email sent out to apprentices at the Holmesglen Institute of TAFE, and were then selected for their ability to be demographically representative (apprentice age, gender) as well as in relation to business models and trades within the food trades industry. Food trades apprenticeships were targeted in this study due to their low rates of apprenticeship completion. It was thought that poor training practices may be exaggerated in the foods trade models of apprenticeship provision, and that this would offer insights into broader problems within apprenticeship training.

Table 1   Survey of apprentices

Pseudonym	Apprentice gender	Age	Apprentice trade type	Employment period	Business type	Size of the business – no. of employees
App. 1	Female	26	Cook	18 mths	Café	Over 20
App. 2	Female	36	Patisserie	13 mths	Cake factory	Under 20
App. 3	Male	18	Cook	15 mths	Restaurant chain	Over 100
App. 4	Male	22	Cook	12 mths	Restaurant, small	Over 50

Notes: The surveys were based on four apprentices and the co-participants of their individual training plans. Interviews were conducted with the apprentices only, and as such the pseudonyms reflect the identity of the apprentice.

Findings and discussion

Important to this study have been the analysis of unmet explicit obligations and the mismatched implicit expectations of the three parties of an apprenticeship training plan agreement. Explicit obligations are often important legal requirements, and are included in the training plan by the trainer before being signed off in negotiated agreement by all three parties. Three of the four research participants indicated a common mismatch in shared knowledge and important explicit obligations with the other parties — the employers and trainers. These included: their knowledge of the training plan's contents and how it works; the rights of the apprentice to equity in negotiating the training plan content; and the rights of the apprentice to early release from their training contract through the provision of competency-based completion.

Misunderstandings stemming from implicit expectations were also common in the responses of the apprentice participants. These are important expectations established during the early stages of the apprentice's indenture but are never documented. These implied expectations, if perceived as having been broken, were identified as resulting in the apprentice disengaging from the process and potentially leaving their apprenticeship (Commonwealth of Australia 2011; Chan 2011; Smith, Walker & Brennan Kemmis 2011). Many mismatched implicit expectations identified in this research were unique and had not been previously identified in the literature, including the level of contact the employer and apprentice had with the trainer; that competency-based completion would be implemented and that the apprentice could be released early from their training; that it was alright for apprentices to be trained by other apprentices; that working overtime was a significant obligation for the apprentice; and that the level of personal commitment to training and the prioritising of work over personal life by the apprentice are often viewed differently by the apprentice and the employer.

The research revealed more specific evidence of mismatched expectations on training, particularly in the areas of training volume and training delivery. In three of the four case studies, apprentices

registered dissatisfaction with the amount of training being delivered in the workplace by the employer. A common theme in the apprentices' responses was that they 'assumed there would be a lot more training' (App. 1). This is indicative of a mismatched expectation and a potentially unfulfilled obligation by the employer. The delivery of training by other apprentices was also a very contentious issue in all four case studies. The apprentices gave strong responses indicating their opposition to the practice of senior apprentices training them in their daily duties.

> At the moment I don't actually know who's meant to be training us, because at the moment I'm being trained by other apprentices, so I'm learning from apprentices. (App. 2)

There has been little government direction on the issue of apprentices providing training to their less experienced colleagues. The issue is alluded to by the Victorian Department of Education and Early Childhood Education and Victorian Registration and Qualifications Authority in their guidelines on apprenticeship training. However, the only standard addressing this issue is the requirement that an 'experienced trainer' be available for the training of apprentices. What constitutes 'experienced' is not clearly identified (Victorian Department of Education and Early Childhood Education 2014; Victorian Registration and Qualifications Authority 2014). While all employers and trainers indicated this arrangement as acceptable, all four apprentices clearly indicated this as unacceptable and counter to their understandings of the employer's obligations.

There was evidence in the research data that the majority of the participating apprentices had signed the training plan without a full understanding of the terminology or its contents. The possibility that three of the apprentices had either not read the document before signing it or that the trainer had failed to explain its contents adequately must be considered. As an important legal document (Victorian Department of Education and Early Childhood Education 2014; Victorian Registration and Qualifications Authority 2014; Victorian Government Auditor-General 2014) developed to encapsulate the training rights and responsibilities of the apprentice, this is considered to be an important finding. If an apprentice has little or no knowledge of their training rights or entitlements at the beginning of their apprenticeship, the likelihood that training expectations will be unfulfilled or unrealistic considerably increases. When expectations are unmet, apprentices are more likely to disengage from or consider leaving their apprenticeships (Commonwealth of Australia 2011; Chan 2011; Smith, Walker & Brennan Kemmis 2011).

Evidence from the participating employers' responses indicated that they engaged only with those training commitments that suited their workplace priorities. Competency-based completion and scheduled training in the workplace were considered to be conditional and subject to their discretion. The views of the apprentices supported these findings, with one apprentice identifying that they were 'employed to work, not to [undertake training]' (App. 4), and that 'the boss would never allow' (App. 1) for the early competency-based completion and release from their apprenticeship. The data from the apprentice's responses further indicated the presence of 'restrictive' workplaces, identified in the literature (Fuller & Unwin 2013) as being workplaces where the status of employee dominates over learner, and training is secondary to production.

> I thought there would be a lot more training in the workplace. I didn't realise it would be so, 'use your initiative' style of working. You need to be shown certain processes and certain things, it's not like there is someone there to show you how to do it, then you talk about it, and they watch you do it. It's more that you have a conversation and you give it a go, and if this works then it works, so, I assumed there would be a lot more training. (App. 1)

> Nobody has the time in this day and age to train someone … and I think that in workplaces, when people are actually doing apprenticeships you assume that you are actually gonna learn and get

> trained up … at work it's not so much a training, you are employed to work, not to [undertake
> training]. (App. 4)

There was evidence in the data that trainers are not fulfilling their obligations towards apprenticeship training, specifically in the requirement for them to construct a training plan through consultation with the apprentice and the employer. There is the possibility that trainers are negligent in imparting knowledge and understandings to the other parties when asking them to sign the training plan, or that trainers are assuming that a comprehensive understanding exists when the other parties read the plan and agree to sign. There was further evidence from the apprentice interview responses that the trainer had not fulfilled the important obligation of consulting and including them in the construction and negotiation of the contents of the training plans.

> I just sort of ignored it. It didn't really go past me at the time so I didn't really worry about it. I
> just let everyone else deal with it. (App. 1)

This is considered an important finding, with clear implications for both the rights of the apprentice and the responsibilities of the trainer.

In the interviews with the apprentices, participants were asked whether they had ever considered leaving their apprenticeship. While all participants acknowledged that they had toyed with the idea, three indicated they had seriously considered it, while the other indicated that it was a temporary and isolated experience.

Conclusions

The specific aim of this research was to examine the explicit and implicit understandings of the training plan in apprenticeship contracts, and the potential impact of mismatched expectations around training on completion rates. While this was a small research project, its findings have both supported the current research into apprenticeship non-completion as well as identified a number of areas for potential future research. As identified in the literature, misunderstandings and poor training lead to disengagement and non-completion by apprentices. The possibility exists that trainers are not fulfilling their role of creating well-understood training arrangements between all parties. There is also evidence to suggest that employers are selective in implementing the required workplace training and reluctant to engage with competency-based completion requirements.

What this research indicates is that, despite the important role that training plans could play in clarifying understandings and delivering on training expectations, apprentice expectations are still not being met.

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Missing links: connections between VET qualifications and pay in modern awards

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An assumed incentive for an individual to complete a VET qualification is the chance to earn higher pay. This paper examines the relationship between AQF qualifications, job roles and pay rates in Australia's 122 modern awards. Modern awards directly determine the pay and employment conditions of around one in five Australian workers (many of them in VET-relevant occupations) and indirectly influence many more, by setting the standard for enterprise agreements.

Each classification in each modern award was analysed and allocated to one of six categories describing the relationship between an AQF qualification and the pay rate, ranging from no mention of an AQF qualification to exclusive (only someone with that AQF qualification can be employed in that classification). Preliminary data suggest:

- 35 out of 122 modern awards contain no reference to AQF qualifications.
- By contrast, 32 out of 122 modern awards contain at least one classification that guarantees an employee with a particular qualification a higher pay rate.

The paper details how these patterns linking qualifications to classifications vary by industry. While awards in traditional blue collar areas such as manufacturing include extensive connections between AQF qualifications and job classifications, many modern awards in fast-growing service industries contain few, or no, connections.

The paper summarises how frequently the various qualification levels are mentioned in modern awards, as well as the pay range to which different qualification levels are linked.

These findings show that the once-strong links between the VET system and the industrial relations system in Australia have weakened over time, particularly in the last 20 years.

Introduction

A distinguishing feature of Australia's workplace relations system is the fact that it does not feature one minimum wage. Instead, through modern awards, multiple minimum wages co-exist, which take into account, among other factors, the value of the job being performed and the skills possessed by the worker.

This paper investigates the impact of labour market and educational institutions — particularly modern awards, collective agreements, and the Australian Qualifications Framework — on the value of qualifications and the incentives to acquire additional skills. It addresses the following four questions:

- Across all 122 modern awards, how are qualifications recognised in classification structures?
- How do these relationships vary between industries?
- What relationships exist in modern awards between qualifications, classifications and pay?

- What are the likely impacts of such arrangements on skill utilisation and incentives for skill acquisition?

After briefly outlining the background to the modern awards and the classifications contained within them, this paper presents the findings from an analysis of all job classifications in all 122 Australian modern awards.

During the late 1980s and early 1990s, significant reforms in the VET system and the industrial relations system moved in tandem. An agenda known as award restructuring sought to encourage a more flexible use of labour, reduce demarcations and introduce incentives for skill acquisition and recognition (Hampson 2004). This was done through radically revising the job classifications found in awards. The result was a great deal of broadbanding and the introduction of broad skill-based classifications to replace narrow job- or task-based classifications (Buchanan 2002). The advantage for workers and their unions for their participation in this process was seen to be skill-based career paths.

The prototype for skill-based classification structures was adopted into the *Metal Award 1984*: a 14-point classification scheme, ranging from C14 (a minimum wage worker performing process worker or labourer roles) up to C1 (a university-qualified worker [for example, graduate engineer, surveyor, draftsperson]). Under this structure, the minimum classification for a qualified tradesperson is C10.

While much has changed in the VET and industrial relations systems in the last 20 years, the foundations of that period of reform are still visible: a VET system with high levels of employer input; the Australian Qualifications Framework, a national system of qualifications intended to promote consistency of learning outcomes across and within qualification levels; and an award system that provides a framework of minimum rates of pay for workers with different qualifications performing different jobs, rather than a single minimum wage. Awards still directly determine the wages and conditions of 16% of Australian employees, with a higher proportion in some industries (ABS 2013). They also have an indirect impact through influencing outcomes, including pay and classification arrangements, in collective bargaining agreements (Buchanan et al. 2013).

Findings and discussion

With some exceptions, the classification in each of the 122 modern awards was analysed for its relationship to formal AQF qualifications, and allocated to one of six categories:

- *No reference*: no reference to any AQF qualification.
- *Indicative*: refers to an AQF qualification (or qualification level) as indicating that it may be a typical requirement or appropriate for that classification, but it is clear that the qualification is not required for that classification.
- *Partially determinative*: refers to an AQF qualification/qualification level but the grade does not rely solely on possession of that qualification. There are two reasons why a classification may be recorded as partially determinative. First, the worker may be eligible for the classification if they have the equivalent skills or experience without necessarily holding a formal qualification (marked in table 1 below as 'Equiv.'). This may be subject to a formal recognition of prior learning process, on the basis of years of prior experience, or some less formal means. Second, the classification may be subject to skill use. In other words, a qualification may not be a sufficient condition to entitle a worker to a particular classification, and the employer is entitled to judge whether or not the qualification is relevant to the role being performed (marked in table 1 as 'skill use').
- *Fully determinative*: an employee with that qualification must be employed on at least that classification.

- *Exclusive*: the classification definition refers to an AQF qualification and *only* someone holding that qualification is eligible to be employed in that classification.
- *Implied*: makes reference to formal qualifications or being appropriately qualified but does not mention an AQF qualification or an AQF qualification level (usually involves job roles that are restricted because of licensing or registration).

Classifications referring to apprentices and trainees were excluded from this analysis, as they have already been the focus of detailed research (Oliver 2012) and the aim of this paper was to focus on the pay outcomes for workers who already have qualifications, rather than those undertaking them.

The first step in exploring the institutional relationship is to review the formal qualifications and job classifications in all modern awards. As table 1 shows, certificate III is the qualification level most frequently referenced in modern award classifications. This reflects its status as the successor to trade certificates in the Australian Qualifications Framework. The next most commonly referenced level is certificate IV. These two levels combined account for over 50% of all references to formal AQF qualifications, whereas postgraduate qualifications (graduate diploma or certificate, master's degree or PhD) garner only 15 references, compared with 160 for certificate III.

Some classification categories are more strongly associated with particular qualification levels than others. 'Exclusive' references, which state that a job classification can only be filled by a person holding the specified qualification, are most likely to require higher-level VET training (certificate III to advanced diploma). Often this reflects employee-level or enterprise-level regulation of VET-level occupations; for example, childcare, where providers must now ensure that employees have a minimum certificate III qualification. A bachelor degree is specified in over half of all 'Fully determinative' clauses, which designate the lowest possible classification for an employee holding the named qualification, while the next most common qualification level is the certificate III. Fully determinative clauses frequently designate entry-level classifications, so the predominance of these two qualification levels is unsurprising, given that bachelor degrees are linked to the licensed professions and the certificate III is linked to the licensed trades. A bachelor degree is also denoted by the vast majority of 'Implied' references, where the employee must be 'appropriately qualified' according to formal licensing or registration requirements.

Table 1   References to AQF qualification levels in modern award classifications by reference type (N)

| | | | Partially determinative | | | | | |
	Indicative	Implied	Skill use	Equivalent	Both	Fully determin.	Exclusive	All ref. types
Year 12	3	2	0	3	0	0	0	8
Cert. I	5	5	8	0	1	0	0	19
Cert. II	3	14	10	0	1	0	2	30
Cert. III	21	53	55	8	6	13	4	160
Cert. IV	6	40	30	13	3	9	3	104
Diploma	8	14	15	7	3	8	0	55
Adv. diploma	0	3	7	1	0	3	0	14
Bachelor	5	13	3	3	19	5	15	63
Grad. dip./grad. cert.	2	5	1	0	0	2	0	10
Master's	1	0	0	0	0	0	1	2
Doctoral degree	0	0	0	0	3	0	0	3
All qualifications	54	149	129	35	34	42	25	468

Source: Authors' analysis of modern awards.

A similar pattern can be seen when the results are collated at the award level. Each award was allocated to a type, according to the strongest type of clause contained in any of the classifications in that award; the results are shown in table 2. These types ranged from no reference to any qualifications at all in the whole award, to containing at least one exclusive classification. As a separate category, awards containing at least one implied classification have been presented, because these are a different type of relationship, but this category overlaps with awards containing at least one partially determinative classification. The awards have been grouped by industry.

Across all awards, 29% (or 35 out of 122 awards) have no reference to any AQF qualification. Only 68% of awards had at least one partially determinative (or stronger) classification, meaning that in almost a third of awards the link between job classifications and formal qualifications is no more than a simple indication or illustration of the appropriate skill or qualification level.

The 'strongest' awards are *Metal Award 1984* descendants (which for historical reasons have been given their own category) and awards in the government and community services, health and education grouping. The weakest industries are transport, distribution and utilities; and agriculture, mining, manufacturing and construction. The growing services industries (both the low-skill personal services, hospitality, retail and recreation and the high-skill professional, financial, property and business services) fall somewhere in between – a third of awards contain no references at all, but between a quarter and one in five have some exclusive or partially determinative clauses.

Table 2   References to AQF qualifications in modern awards by industry (row %)

Industry	No reference to AQF quals in award	No reference or indicative only	At least one partially determ. (or stronger) class	At least one fully determ. (or stronger) class	At least one exclusive class	At least one implied class
Agriculture, mining, manufacturing and construction	34	34	66	6	6	9
Government and community services, health and education	0	0	100	63	32	37
Metal Award 1984 descendants	0	0	100	80	60	0
Personal services, hospitality, retail and recreation	30	40	60	20	15	5
Professional, financial, property and business services	33	42	58	25	13	0
Transport, distribution and utilities	45	45	55	18	18	5
All industries	**29**	**32**	**68**	**26**	**17**	**10**

Source: Authors' analysis of modern awards.

Table 3 reveals how unevenly the references to AQF qualification levels are distributed across industries. The certificate III is the most commonly referred to qualification overall and the most consistently referred to across all industry categories. This in large part reflects its position as the main qualification for trade occupations, which, while most common in the manufacturing and construction industries, are distributed across the labour market. References to bachelor-level qualifications are mostly in the government and community services, health and education category.

While not shown in the table, all references to master's and doctoral degree qualifications are in the government and community services, health and education category. There are very few references to bachelor qualifications in professional, financial, property and business services, despite growing use of university-level qualifications in these fields. Diploma qualifications are less commonly referred to than certificate III/IV qualifications and bachelor qualifications. Only the *Metal Award 1984* descendants make extensive reference to them, although they are not uncommon in government and community services, health and education; transport, distribution and utilities; and professional, financial, property and business services.

Table 3 References to selected AQF qualification levels in modern awards by industry (row %)

Industry	Cert. III	Cert. IV	Dip.	Bach.	Any AQF level
Agriculture, mining, manufacturing and construction	63	34	0	6	66
Government and community services, health and education	63	74	37	79	100
Metal Award 1984 descendants	80	80	60	40	100
Personal services, hospitality, retail and recreation	65	30	20	5	70
Professional, financial, property and business services	38	38	33	21	67
Transport, distribution and utilities	50	41	27	18	55
All industries	**57**	**43**	**23**	**24**	**71**

Source: Authors' analysis of modern awards.

Table 4 presents the pay range data relating to award pay rates for classifications referring to AQF qualifications. The data already presented show that the certificate III is still the core connection linking the training system with the award system. However, the idea of the 'certificate III—C10 nexus' has been severely fragmented. The median weekly rate is $724.50 (the same as the C10 rate found in the *Manufacturing and Associated Industries and Occupations Award 2010*). However, the weekly pay rates for classifications referring to a certificate III qualification range from $623.80 to $928.90.

In addition to the dispersion within qualification levels, there is also significant overlap between qualification levels, especially among the VET-level qualifications and bachelor-level qualifications. Very few classification rates mention Year 12 as a qualification level but those that do pay a substantially higher rate than many classifications referring to a certificate I or certificate II qualification. Likewise, there are few mentions of advanced diploma qualifications but the associated pay rates are higher than for many bachelor-linked classifications. Perhaps the most striking feature of the data, however, is the wide dispersion of the bachelor rate, ranging from $672.67 (or just 108% of the national minimum wage) to $1512.88. Despite the growing proportion of workers with university qualifications (even in the award-reliant segment of the workforce), there is clearly no corresponding 'bachelor—C1' nexus.

A final observation relating to pay is the very tight relativities between qualification levels. A period of flat rate rather than percentage increases to award wages during the 2000s compressed relativities (Healy 2010). As a consequence, the award rate for a worker using a doctoral degree in their work is just 140% of the current minimum wage of $622.20 a week. This finding is all the more significant because other research (Wright & Buchanan 2013) has shown that award-reliant workers are typically employed on the lowest possible classification level.

Table 4   Minimum award pay rates by qualification level

AQF Level	Mentioned in		Minimum weekly pay rates ($)		
	Classifications	Awards	Median	Lowest	Highest
Year 12	8	5	724.90	661.60	831.67
Cert. I	19	19	687.50	654.00	728.30
Cert. II	30	24	687.65	660.80	769.90
Cert. III	153	69	724.50	623.80	928.90
Cert. IV	85	53	790.50	706.70	968.00
Diploma	43	28	847.60	711.45	1029.00
Adv. diploma	11	7	938.60	915.80	1120.69
Bachelor	62	29	859.90	672.67	1512.88
Grad. dip./grad cert.	6	6	1203.38	927.43	1280.49
Master's	2	2		858.81	1215.00
Doctoral degree	3	2	1013.67	1013.67	1013.67

Source: Authors' analysis of modern awards

Conclusions

The results of this study show the very limited reach of the Australian Qualifications Framework in the award system. Outside the *Metal Award 1984* descendants and the government, education, health and community services industries, awards provide little incentive for workers to complete formal qualifications. This is particularly the case given the high proportion of partially determinative classifications across awards. In relation to the level of qualifications, the most commonly referred to qualifications are certificate III and certificate IV qualifications (a legacy of the old trade certificate and advanced certificates). Higher-level VET qualifications, entry-level certificates, and higher education qualifications receive much less attention, despite their growing importance in the modern labour market. Even for fully determinative, exclusive and implied classifications, low wage rates (in absolute and relative terms) provide little incentive for workers. Where strong relationships exist, licensing and registration arrangements often play a role, introducing another set of institutions into the analysis. Taken together, these findings suggest that the relationship between the AQF and the modern award system does little to encourage the skill acquisition objectives set by government policy. More work is required, however, to draw out what this means in practice. In particular, the findings associated with managerial discretion, skill use and variation by industry deserve further research.

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