

Credit transfer rates at a regional university on the path towards dual sector status

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1. Abstract

Educational pathways within and across the Australia tertiary sector are an important issue in creating a seamless tertiary environment, encouraging Australians to obtain further education and training, and to develop skills and employment options that will contribute to Australia's economic productivity. The current research on movement between the higher education (HE) and vocational education and training (VET) sectors points to difficulties in data collections in both sectors (Harris et al 2006, Karmel & Nguyen 2003), with the statistics being problematic and even controversial (Teese & Polesel 1999; Pitt 2001; Ramsay et al. 1997). The National Council for Vocational Education Research (NCVER) collects the Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS) for the Australian VET sector, and whilst this contains statistics relating to Recognition of Prior Learning (RPL) and Credit Transfer, very little is known about this movement into the higher education sector through the Higher Education Statistics Collection. Individual HE institutions maintain data at the organisational level, but to date there has been no systemic review of these data across institutions. As a preliminary exploration, the case study presented here provides empirical data on the rates of Credit Transfer at CQUniversity, which is a regional university approaching dual sector status. Work has already commenced on articulation and credit transfer issues within this university as it transitions to a dual sector institution scheduled for 2014. CQUniversity embarked on its transition to a dual sector university with Central Qld TAFE with the aim of providing a seamless stream of both academic and vocational learning pathways through more study options, articulation pathways and improved facilities by working together more strategically, rather than competing or working in isolation. The intent was to develop as a single institution offering a comprehensive education experience.

This paper examines rates of Credit Transfer for undergraduate and postgraduate programs offered between 2011 and 2012. The paper then concludes by identifying key areas for future research with respect to dual sector pathways.

Key words: Credit transfer, dual sector, pathways, VET, HE, regional universities

2. Introduction

Educational pathways within and across the Australia tertiary sector are an important issue in terms of creating seamless tertiary environment, encouraging Australians to obtain further

education and training, and to develop skills and employment options that will contribute to Australia's economic productivity. Dual sector institutions are those which offer both vocational qualifications and university degrees. These dual sector institutions have come about through the amalgamation of an existing technical and further education (TAFE) institution(s) and a university. Credit transfer is a major mechanism for creating and facilitating these educational pathways. The Australian Qualifications Framework (AQF, 2009, p. 24) defines credit transfer as 'a process that provides students with agreed and consistent credit outcomes for components of a qualification based on identified equivalence in content and learning outcomes between matched qualifications'. The focus of this paper is the rates of credit transfer for CQUniversity, which, in mid-2014, will become Queensland's first dual sector university. CQUniversity has a Course Credit and Articulation Policy, which defines credit transfer as: 'the value assigned for the recognition of equivalence in content and learning outcomes between different types of learning and/or qualifications which reduces the amount of learning required to achieve a qualification (CQUniversity, 2013, p. 1). This paper reflects on data extracted from a recent study on the pathways for VET award holders into Australian universities in 2010, accompanied by internal CQUniversity data that reports on the rates of credit transfer for new enrolments for 2011 and 2012 across six academic schools in an attempt to answer the research question posited:

RQ: What are the implications of CQUniversity's recent admission rates through credit transfer for its impending dual sector status?

3. Literature review

The ease by which students can move between vocational and higher education is recognised as an important characteristic through which universities can respond 'to a global audience' and to adopt the paradigm of being "accessible to all" (Millman, 2013). The ability to legitimately recognise prior learning through the credit transfer process is one tool within the policy arsenal which is designed to facilitate this ease of movement. As noted by Watson, Hagel and Chesters (2013, p. 10), '[t]he number of domestic students admitted to Australian universities on the basis of a VET award has increased by 75% over the past decade. In 2001, 12,916 students were admitted to undergraduate programs on the basis of a VET award, compared with 22,676 in 2010'.

Notwithstanding the increase in the numbers of students using the credit transfer pathway from VET to higher education, research to date has revealed that data collection has been of generally poor quality, lacking cohesion and transparency (Harris, Sumner & Rainey 2005; Albrect 2004, Harris, Rainey & Sumner 2006, Moodie 2003). This is of serious concern given that mobility from VET to HE is such an important policy agenda (particularly for dual-sector institutions), and that these data are fundamental to mapping and further understanding credit transfer processes (Walls & Pardy 2010).

After examining the 'patterns of admission to VET award holders into 37 publicly funded Australian universities by institution and field of education', Watson et al., (2013) concluded that substantial differences existed between universities with respect to the proportion of undergraduate commencing students that are admitted on the basis of a VET award. Further, they reported that these 'differences are due primarily to the policies and practices of universities rather than to the characteristics of VET award holders or differences between study' (Watson et al., 2013, p. 8). This is of particular note because in regional education settings, there is often only one university provider. Consequently, in many cases, the internal

policies of a particular institution can have potentially very far-reaching implications, which impact not only individual students, but also the broader regional skilling ecosystem,

Rod Camm, the current Managing Director of the NVCER recently noted that such inconsistencies in the policies and practices between universities ‘may restrict the access of VET award holders to higher education in some regions’ (Watson et al 2013, p.3). The unnecessary restriction of access is a matter of concern to CQUniversity as it progresses towards being the first and only dual sector university in Queensland. It is also of paramount concern given CQUniversity’s attempting to engage with its ‘power of place’ – that is, to be regionally responsive and reflect the needs of the business and industry in communities hosting the university’s campuses. For example, in regional Central Queensland, this includes a strong connection with resource-extraction industries, which heavily influence the economy and workforce structure. Importantly, CQUniversity’s strategic agenda around exploiting the ‘power of place’ actually pre-dated the initiative to work towards a dual-sector model of operation. Hence, the drive to examine the internal processes and practices within the institution for ways to better support students has existed outside considerations of pathways, credit transfer and articulation arrangements.

The research data collected by Watson et al., (2013) enabled them to cluster universities into three groups. Cluster 1 (comprising 7 universities) was those institutions that admitted relatively high proportions of VET award holders in all fields of education. Cluster 2 (comprising 16 universities) were institutions where the rate of admission of VET award holders was variable across fields of study, but were nonetheless close to the national average (being 10% across all fields). Lastly, Cluster 3 (comprising 14 universities) were institutions where the rate of admission of VET award holders was consistently below the national average for every field of study.

Their findings with respect to dual-sector universities are insightful as the data highlighted that ‘Australia’s five dual-sector universities (RMIT University, Swinburne University, Charles Darwin University, Victoria University, and the University of Ballarat (now Federation University Australia)) were distributed between Clusters 1 and 2. The authors therefore contend that this ‘dispels the common assumption that VET to higher education pathways are the ‘business’ of dual rather than single-sector universities’ (Watson et al., 2013, p. 8).

Interestingly, their analysis revealed that:

While two of Australia’s dual sector universities – RMIT University and Swinburne University – admit VET award holders at twice the national rate, the other three dual-sector universities – Charles Darwin University, Victoria University and the University of Ballarat do not. The university which admits the highest proportion of VET award holders – Charles Sturt University (26%) is not [a dual sector]. Three single-sector institutions – University of Western Sydney, Edith Cowan University and Deakin University – admit VET award holders at similar rates to the dual-sector Victoria University (16-17%) (Watson et al., 2013, p. 11).

CQUniversity was identified as a Cluster 2 university, recording a proportion of VET award holders being admitted to study at slightly higher rates than the national average of (11% for CQUniversity compared with 10% nationally). Three of the dual sector universities (Swinburne University of Technology; RMIT University and; Vitoria University) offered

admission to VET holders in 2010 at higher rates than CQUniversity whilst two others offer similar rates to CQUniversity (Charles Darwin University and University of Ballarat). Watson et al., (2013) also examined rates of admission by fields of education (FOE). CQUniversity was identified as admitting VET award students at a rate higher than the sector average into the FOEs of Management (21%), Health (15%) and Engineering and Related Technologies (12%), whereas rates were lower than the sector average into the FOEs of Creative Arts (7%), Education (10%), Information Technology (13%) and Society and Culture (7%). It is likely that this reflects the training needs of the Central Queensland community, which has a diverse regional economy, but with strong representation by the resources sector, health, and government services.

The Watson et al., (2013) research report was based upon data available to 2010. The data provided in this paper for new commencements of undergraduates and postgraduates admitted in 2011 and 2012 to CQUniversity will provide additional data to further understand, from an institutional level, the patterns of admission and the use of the Credit Transfer policy by students to gain entry into CQUniversity.

4. Methodology

The methodology employed for this paper involved extraction and analysis of secondary data sets from CQUniversity's Performance Dashboard, an internal data collection platform. Data viewing and interrogation was covered by the necessary Human Research ethics approval (certificate #H1305-094). The dataset comprised internal credit transfer data for new commencements in the years 2011 and 2012. Data for both undergraduate and postgraduate across the six schools within CQUniversity is presented. These data sets have been chosen as they build on the data presented in Watson et al., (2013) which related to undergraduate statistics in 2010. The CQUniversity data is for 2011 and 2012 and includes postgraduates. The CQUniversity internal data system records credit transfer in terms of Equivalent Full Time Student Load (EFTSL). These EFTSL values are 'a measure of the student load attributable to a part of a unit of study, a unit of study or to a set of units of study. The measure indicates the notional proportion of the workload which would be applicable to a standard annual program for a student undertaking a full year of study in a particular year, of a particular course' (CQUniversity, n.d.). The data system shows by EFTSL the programs that have the most transfer credits and also shows the number of transfer credits (by EFTSL) that students have obtained from CQUniversity programs as well as non-CQUniversity programs.

The authors have also drawn on statistics and data from a recently published and highly relevant NCVET report: *A half-open door: pathways for VET award holders into Australian universities*, authored by Watson et al., (2013). The data extracted from this study are in reference to the five existing dual sector universities in Australia, as well as for CQUniversity which will become Queensland's first dual sector university in 2014 –the first Australian institution to adopt this position in the past two decades.

Limitations

The Watson et al., (2013) report covers the rate of admission of VET award holders to undergraduate higher education for 2010, irrespective of new or continuing enrolment status.

The CQUniversity data presented in this paper covers credit transfer data for new enrolments (undergraduate and postgraduate) for 2011 and 2012 across six academic schools. As such the data sets are not directly comparable; however the CQUniversity dataset provides the advantage of institutionally-based data that enables a more detailed picture of the use of credit transfer to emerge.

5. Findings and Discussion

Watson et al., (2013) ranked the 37 publically-funded Australian universities in relation to the proportion of total undergraduate commencements admitted on the basis of a VET award for the year 2010. The resulting rankings for the five dual sector universities, and for CQUniversity, were as follows:

- 2nd Swinburne University of Technology
- 3rd RMIT University
- 6th Victoria University
- 10th Charles Darwin University
- 15th CQUniversity
- 18th University of Ballarat.

The report has clustered the 37 Australian universities into three levels of similar patterns of admission to VET award holders. Cluster 1 contains 7 universities, three of which are dual sector institutions. Cluster 2 contains the remaining 2 dual sector institutions and CQUniversity. The rate of admissions of students on the basis of a VET award in undergraduate programs for the sector as a whole is 10%. The seven universities in Cluster 1 have an average 19% of admissions of students on the basis of a VET award in undergraduate programs. For the sixteen universities in Cluster 2 the average is 10%. The proportion for the fourteen universities in Cluster 3 is 3%. Charles Sturt University has the highest rates at 26% and is joined by University of Western Sydney (17%), Edith Cowan University (16%) and Deakin University (16%) in Cluster 1, along with the Cluster 1 dual sector universities listed below in Table 1.

Table 1: Rates of admission for VET award holders in 2010, for the Australian dual sector university cohort, plus CQUniversity

Cluster 1 (n=7)	19%	Cluster 2 (n=16)	10%
Swinburne University of Technology	21%	Charles Darwin University	12%
RMIT University	20%	CQUniversity	11%
Victoria University	16%	University of Ballarat	11%

Source: Adapted from Tables 2 & 3 (Watson et al., 2013, pp. 12-14).

The Watson et al (2013) study also presented rates of admission of VET award holders to undergraduate programs on the bases of field of education (FOE). Table 2 provides these percentages for higher education enrolment in 2010. We have extracted the data for the five dual sector universities and CQUniversity from Tables within the Watson et al., (2013) report that have analysed rates of VET award holders admission by field of education for 2010.

Table 2: VET award holders for all undergraduate commencement in 2010 by field of education

FOE	Fields of Education	% of total admissions allocated to VET award holders during 2010
07	Education	14.9
02	Information Technology	14.2
08	Management & Commerce	13.0
06	Health	11.7
04	Architecture & Building	10.2
09	Creative Arts	8.4
10	Society and Culture	8.3
03	Engineering & related technologies	7.4
05	Agriculture, environmental and related studies	5.8
01	Natural and physical sciences	3.7

Source: Adapted from Table 2 (Watson et al., 2013, p. 13).

Table 3: Rates of admission on basis of VET award by Field of Education for the Australian dual sector university cohort, plus CQUniversity, 2010.

Cluster 1	FOE07 15%	FOE02 14%	FOE08 13%	FOE06 12%	FOE04 10%	FOE09 8%	FOE10 8%	FOE03 7%	FOE05 6%	FOE01 4%	All
RMIT	20	9	24	18	15	21	26	22		11	21
Swinburne		23	28	54	19	15	24	11		19	20
VU	24	23	13	28		12	13	13		12	16
Cluster 2											
CDU	12	0	15	31	0	11	0	18	0	0	12
UoB	20	6	7	16		16	17	0		10	11
CQU	10	13	21	15	0	7	7	12		0	11

Shaded areas are those which the percentage admission rates is above the sector average

Blank cells indicate the university does not offer courses in this field of education

Source: Adapted from Tables 5 & 6 (Watson et al., 2013, pp. 16-17).

CQUniversity has above average admission rates based on VET awards in the following three FOEs: Management and Commerce, Health, and Engineering and related technologies. In Table 4 below, these FOEs have been aligned with CQUniversity current internal structure of six academic schools.

Table 4: Mapping of FOEs with known high VET admission rates (as identified by Watson et al (2013)) to the CQUniversity internal structure of the Higher Education Division.

CQU School	FOE
School of Medical and Applied Sciences	Health Natural and physical Sciences
School of Nursing & Midwifery	Health
School of Engineering and Technology	Engineering and Related Technologies Information Technology
School of Education and Arts	Education Creative Arts
School of Business and Law	Management & Commerce
School of Human, Health and Social Sciences	Health

Of the total Credit Transfer (EFSTL) awarded in all undergraduate and postgraduate programs for new enrolments in 2011 and 2012, we have calculated the proportion which was CQU Credit Transfer and Other Credit Transfers. Table 5 provides these proportions.

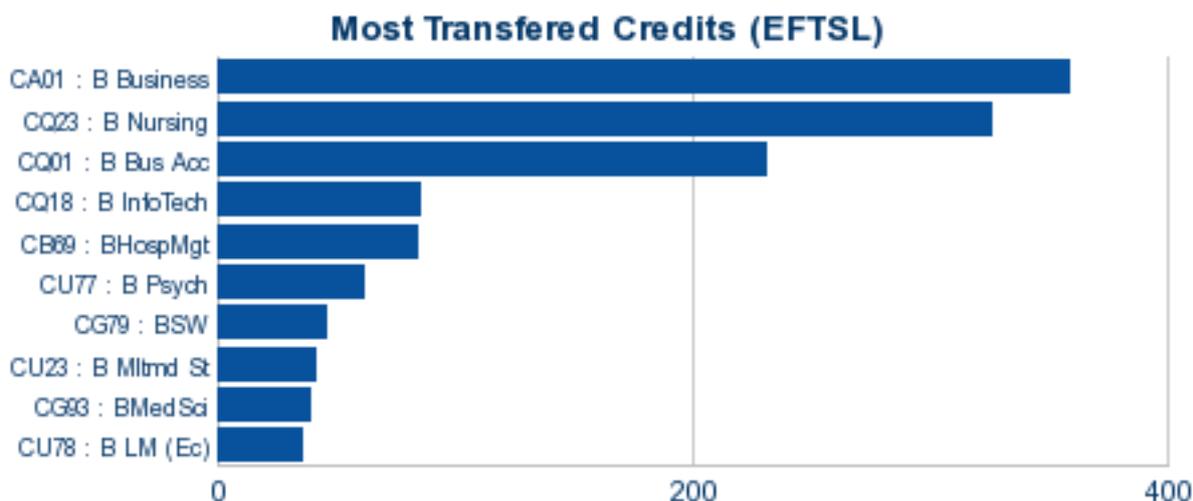
Table 5: Proportion of CQU Credit Transfer and Other Credit Transfer for 2011 and 2012

Intake	CQU Credit Transfer	Other Credit Transfer
2011 new undergraduate commencements	21.9	78.1
2012 new undergraduate commencements	22.5	77.5
2011 new postgraduate commencements	52.6	47.4
2012 new postgraduate commencements	51.8	48.2

The rates for CQU Credit Transfer are higher for postgraduates than it is for undergraduates and reflects the movement of CQU students from their undergraduate studies to postgraduate studies within the same institution.

The top ten undergraduate programs accepting the most Transferred Credits (EFSTL) in 2012 are depicted in Figure 1.

Figure 1: 2012 Undergraduate programs with highest rates of Credit Transfer @ CQU



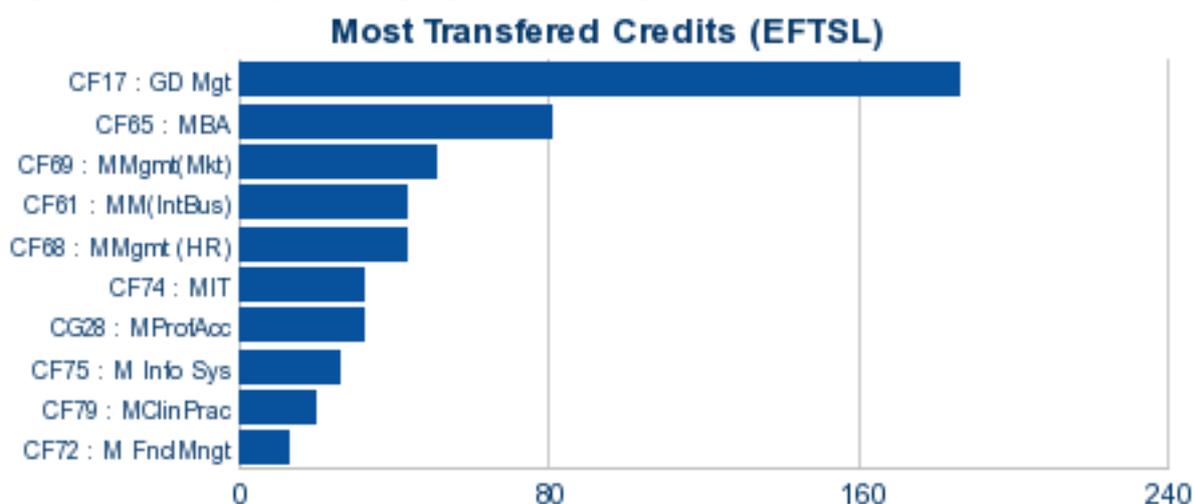
The programs with the highest rates of Credit Transfer in 2012 for new enrolments into undergraduate programs are as follows. Included is the total number of enrolments in these programs in 2012:

Table 6: Undergraduate programs with highest rates of Credit Transfers in 2012 at CQU

Programs with highest rates of CT 2012	2012 Total Enrolments
Bachelor of Business	1,364
Bachelor of Nursing	1,960
Bachelor of Business Accounting	1,351
Bachelor of Information Technology	469
Bachelor Hospitality Management	70
Bachelor of Psychology	554
Bachelor Social Work	256
Bachelor Multimedia Studies	288
Bachelor Medical Sciences	155
Bachelor of Learning Management (Early Childhood)	358

The top ten postgraduate courses with the most Transferred Credits (EFSTL) in 2012 are depicted in Figure 2. All but one is from the Management and Commerce FOE.

Figure 2: 2012 Postgraduate programs with highest rates of Credit Transfer @ CQU



The programs with the highest rates of Credit Transfer in 2012 for new enrolments into postgraduate programs are as follows. Included is the total number of enrolments in these programs in 2012:

Table7: Postgraduate programs with highest rates of Credit Transfers in 2012 at CQU

Programs with highest rates of CT 2012	2012 Total Enrolments
Graduate Diploma in Management	813
Master of Business Administration	251
Master in Management (Marketing)	109
Master Management (International Business)	98
Master in Management (Human Resources)	111
Master in Information Technology	285
Master Professional Accounting	730
Master Information Systems	244
Master Clinical Practice	65
Master Financial Management	64

The following data on rates of credit transfer at CQUniversity for new enrolments in undergraduate programs in 2011 and 2012 are displayed in Table 8.

Table 8: Credit Transfer for new enrolments in undergraduate programs 2011 and 2012 at CQU

CQU School	2011 new enrolments	2011 new students with Credits	% of new students with Credits	2012 new enrolments	2012 new students with Credits	% of new students with Credits
Medical and Applied Sciences	489	141	28.8	621	175	28.2
Nursing & Midwifery	798	302	37.8	777	327	42.1
Engineering and Technology	799	273	34.2	713	153	21.5
Education and the Arts	819	239	29.2	778	189	24.3
Business and Law	1938	1201	61.9	1566	746	47.6
Human, Health and Social Sciences	438	143	32.6	631	169	26.8

A general decrease has been observed in the percent of new enrolled undergraduate students in 2011 compared with new enrolments in 2012, with Credits declining for four of the six schools. The two remaining schools were Medical and Applied Science, which recorded static numbers, and Nursing and Midwifery which increased from 37.8% in 2011 to 42.1% in 2012. Decreases in new enrolments in which Credits are noted for Business and Law (from 61.9% in 2011 to 47.6% in 2012) and for Engineering and Technology (from 34.2% in 2011 to 21.5% in 2012). Despite these trends Business and Law and Nursing and Midwifery have the highest rates of new enrolments with Credits.

The following data on rates of credit transfer at CQUniversity for new enrolments in postgraduate programs in 2011 and 2012 are tabled below.

Table 9: Credit Transfer for new enrolments in postgraduate programs 2011 and 2012 at CQU

CQU School	2011 new enrolments	2011 new students with Credits	% of new students with Credits	2012 new enrolments	2012 new students with Credits	% of new students with Credits
Medical and Applied Sciences	21	4	19.0	24	1	4.2
Nursing & Midwifery	66	32	48.5	69	48	69.5
Engineering and Technology	621	180	29.0	574	137	23.8
Education and the Arts	217	8	3.6	161	9	5.6
Business and Law	1733	847	48.8	1549	714	46.1
Human, Health and Social Sciences	137	32	23.3	147	26	17.7

The percent of newly enrolled students in 2011 for postgraduate programs in Business and Law (48.8%) and Nursing and Midwifery (48.5%) are relatively high, followed by Engineering and Technology (29%) and Human, Health and Social Sciences (23.3%). These

rates drop slightly in 2012 for all schools with the exception of Nursing and Midwifery which has 69.5% of new enrolments in 2012 with Credits and Education and the Arts which has a slight increase from 3.6% in 2011 to 5.6% in 2012.

6. Conclusion

The data presented in this study show that CQUniversity has been recording strong rates of credit transfer within the institution, in the two-three years leading up to the scheduled dual-sector merger. As the university will not be formally operating under the merged business model until 1 July 2014, these statistics cannot be a result of the 'dual-sector' nature of the institution. An alternative conclusion could be that the high rates of credit transfer could reflect the broader skills ecosystem in Central Queensland. For example, one might expect a regional student profile that is strongly anchored in the VET sector, given that a number of key industries in the region are linked with vocational training, rather than higher education, to enable employment: good examples of this may include the health services industry, agriculture and the resource sector. However, this does not bear out in Census statistics, which show that the proportion of the population of Fitzroy statistical division who hold VET qualifications is actually lower than both the state and national averages (5.9% compared with 6.2% and 7.3%, respectively, in 2011) (ABS, 2013).

This being the case, it seems that the current evidence is in support of Watson et al. (2013), in that there is a potentially very important role to be played by a university's admissions philosophy and processes. For example, CQUniversity has developed an outlook of being 'accessible and relevant' to the region (the so-called 'power of place'), thus students may feel greater motivation to apply through non-traditional pathways.

As the university moves to dual-sector status, it might reasonably be expected that applications for credit transfer will increase further, given that the other dual-sectors nationally already record higher-than-average admission rates as a result of their dual business model. For the institution, the implications of this are thus linked with the issues of internal capacity to receive and process credit transfer applications; and the ability to forecast how teaching and learning practices and/or student may need to shift, to cater for this increasingly large slice of the student population.

The Department of Industry's (2013) Australian Innovation System report refers to the contribution of HE and VET to the national innovation system and paints a very strong story about the role the HE and VET sectors play in national prosperity and productivity. It has already been acknowledged that 'greater interconnection between the VET and HE sectors to give students the best opportunity to develop the skills required for the workforce of the future' (Commonwealth of Australia, 2009, p. 18). So, too, with those linkage allow for regional economies to grow and prosper, on the back of strong labour force and skills availability.

CQUniversity is transitioning towards dual sector status and thus has an opportunity to create an institution responsive to regional skill demands and to increasing educational participation rates exists. Education and training rates in Australia are key to increasing rates of employment, workers earnings and increasing innovation:

With its high-level contribution to skills and workforce development in Australia, the tertiary education system plays a crucial role at a time when the Australian economy is undergoing major transformations: the mining boom; the shrinkage of

manufacturing sector; the growth of services sector, the introduction of clean energy policies; the change in the demographic structure of the nation; and further economic integration into the Asian region (Department of Industry, 2013 p. 93).

CQUniversity as a new dual sector institution has a great opportunity to make a significant contribution to assisting to build the skill base within its regional footprint by reflecting upon its internal policy environments to ensure pathways for VET award holders is smoother and more seamless and thereby building the skills base for an innovative regional economy. The findings from Watson et al (2013) indicate that it is internal policies and practices of universities which is the key to promoting educational pathways from VET to HE and this presents a significant potential arena for internal focus for CQUniversity to develop these policies and practices. CQUniversity internal data points to highest rates of Credit Transfer for undergraduates in management and commerce fields and nursing. Recommendations for future research could be driven by the following questions:

- How might a regional dual sector university be supported specifically to develop courses that are sympathetic to VET awards holders, in areas of defined regional or national need?
- Do VET award holders, once admitted; require a different kind of learning support strategy (and what are the resource implications of this)?
- What can be learnt from the Cluster 1 universities in relation to building a seamless transition for VET award holders into HE?
- What are the patterns of admission through Credit Transfer to CQUniversity prior to and after becoming a dual sector institution?

Broadly, these areas of enquiry also feed into a high-level discussion about regional tertiary education provision, especially in the area of new delivery models that may be tailored for regional operating context, and more responsive to business and industry needs through a 'comprehensive' training system.

References

- ABS (Australian Bureau of Statistics), 2013, 2011 Census QuickStats – Fitzroy Statistical Area Level 4, ABS, Canberra.
- Australian Qualifications Framework (AQF) Council, (2009). AQF National Policy And Guidelines On Credit Arrangements, Final Draft, May, AQF Council, Adelaide.
- Commonwealth of Australia, 2009, Transforming Australia's Higher Education System, Attorney-General's Department, Canberra, 67 pages.
- CQUniversity (2013). Course Credit and Articulation Policy, CQUniversity, Rockhampton.
- Department of Industry. (2013). Australian Innovation System Report 2013, Department of Industry, Commonwealth of Australia, Canberra.
- Harris, R., Sumner, R. & Rainey, L. (2005). Student traffic: Two-way movement between vocational education and training and higher education. National Centre for Vocational Education Research, Adelaide.
- Harris, R., Rainey, L., & Sumner, R. (2006). Crazy paving or stepping stones? Learning pathways within and between vocational education and training and higher education. National Centre for Vocational Education Research, Adelaide.
- Karmel, T. & Nguyen, N. (2003). Australia's tertiary education sector, paper to 7th National Conference of the Centre for the Economics of Education and Training, Strategic directions for VET, Ascot House, Melbourne, 15 September.
- Millman, T. (2013). Abridged too far?: credit transfer: examining the transition process from TAFE to university. Melbourne, ALA. 53, 326-335.
- Moodie, G. (2003). VET-higher education transfers and the structure of tertiary education, paper to 6th AVETRA Conference, The Changing Face of VET: Reflection, Regulation and Re-engineering, Australian Technology Centre, Sydney.
- Pitt, H. (2001). Between the sectors: New issues when examining student movement, paper to 9th International Conference on Post-compulsory Education and Training, Gold Coast, Queensland.
- Ramsay, E., Tranter, D., Kain, M. & Sumner, R. (1997). Cross-sectoral linkages: A case study. Evaluations & Investigations Project, DEETYA, Canberra.
- Teese, R. & Polesel, J. (1999). Tracking students across institutional and sector divides: The potential of TAFE and higher education statistical collection', paper to Post-compulsory Education and Training Conference, Looking to the Future, Lifelong Learning Network, University of Canberra, Canberra, 27 August.
- Walls, S., & Pardy, J. (2010). Crediting vocational education and training for learner mobility, NCVER, Adelaide.
- Watson, L., Hagel, P., & Chesters, J. (2013). A half-open door: pathways for VET award holders into Australian universities, NCVER, Adelaide.