

VET in a dual sector context: augury or anomaly?

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Abstract

Until the 1990s dual sector universities have been understood as a Victorian eccentricity shared by the Northern Territory, understandable because of its small size. Since then several Australian universities have become more vertically integrated by offering programs at vocational and secondary education levels, often as registered training organisations and often through wholly owned colleges, such as the Australian Catholic University, ANU, Charles Sturt University, Curtin University, Edith Cowan University, Monash University, University of Adelaide, University of Queensland, University of Technology, Sydney and the University of Wollongong. Interest in dual sector universities is also developing overseas. New Zealand's Unitech and London's Thames Valley University identify as dual sector universities and South Africa's Nelson Mandela Metropolitan University describes itself in terms used by dual sector universities.

This paper considers whether vocational education in a dual sector institution is an anomaly or an augury of future developments. It posits a definition of dual sector universities that distinguishes them from predominantly single sector institutions that offer a modest proportion of load in the other sector and from dual sector educational institutions that are not universities. The paper describes the emergence of dual sector provision: initially in Victoria from the bottom up, more recently in Australia from the top down, and by amalgamation overseas. It considers why dual sector universities emerged in Victoria but not in New South Wales where institutions with otherwise similar histories developed as single sector universities. The paper concludes by considering the potential for the development of new dual sector universities in Australia.

The term 'dual sector university'

The first use of the term 'dual sector university' I have been able to find is a paper published in 2000 by Leesa Wheelahan which considers how dual sector universities can challenge the binary divide between vocational and higher education (Doughney, 2000). Later that year Wheelahan (2000) published *Bridging the divide* in which she considered extensively the difficulties faced by dual sector universities amongst other mechanisms in bridging the deep divide between vocational and higher education in Australia. The first reference to 'dual sector institution' or its cognates I have been able to find is a 1995 conference paper by Margie Cole and Paul Corcoran (1995: 9) describing the early development of Charles Darwin University, a dual sector university then called Northern Territory University. Other early references to dual sector institutions are by Trembath, Robinson and Cropley (1996), Patterson (1997: 301), Donleavy (1998: 68) and Sommerlad, Duke and McDonald (1998: xxii).

The Australian institutions that identify themselves and recognise each other as dual sector universities are Charles Darwin University, Swinburne University of Technology, Royal Melbourne Institute of Technology, the University of Ballarat and Victoria University in Melbourne. These universities share 2 characteristics that

define them as dual sector universities: they have substantial student load in both vocational education and higher education, and they undertake substantial research and award research doctorates.

Other instances of dual sector provision

Many Australian universities offer programs that are vocational education in level and thus are dual sector on a broad use of the term. Some offerings are vestiges of history. Thus, the University of Adelaide offers 3 vocational education diplomas and 4 certificates in music through the Elder Conservatorium of Music which was established by a bequest in 1898. Many dual sector offerings are the result of amalgamations with previously single sector institutions. For example, the University of Queensland offers the Queensland certificate of agriculture at its Gatton College, which was formed as a result of the university's amalgamation in 1990 with the Queensland Agricultural College. Curtin University has 320 equivalent full time students or 1% of its total student load enrolled in vocational education programs at its Kalgoorlie and Esperance campuses which are more than 500 kilometres from Curtin's main campus in Perth. Edith Cowan University has 400 equivalent full time students or 3% of its student load enrolled in vocational education programs in music and theatre.

An institution is vertically integrated to the extent to which it owns its upstream suppliers and its downstream buyers. Thus, a university is more vertically integrated if it offers vocational education or year 12, since these programs supply its students. Chipman (2002) argued that higher education may be made more affordable by reducing vertical integration – by having research done by one part of a university system, scholarship and curriculum design by another part, and delivery by yet another part of the system. But the trend seems to be in the opposite direction towards greater vertical integration of tertiary education, often by pragmatic extensions of existing programs or integrations of programs or services that had previously been offered by other organisations.

For example, the University of Sydney and most other Australian universities offer English language programs which are secondary or vocational education in level and had hitherto been offered by English language institutes. The University of Adelaide offers a certificate IV in teaching English to speakers of other languages and Flinders University offers a certificate in disability studies off shore. The Australian Catholic University is a registered training organisation and offers vocational education certificates and diplomas in education, exercise science, frontline management and nursing.

Some Australian universities have vertically integrated programs and services systematically, most often for international students. One of the earliest and most successful vertical integrations was the University of Technology, Sydney's offering of secondary, vocational education and other sub bachelor programs and services through Insearch, which it established as a wholly owned for-profit subsidiary in 1987. At its Sydney centre Insearch offers academic pathway programs to the university, a range of English pathway and language programs, and one of the world's largest international English language testing system centres. In China Insearch has offered diplomas in English and business as well as the university's bachelor of business in

partnership with Shanghai University since 1994. Insearch established a centre at the University of Essex in 2004 where it offers English language preparation programs and academic and English pathway programs that lead to direct access to Essex University (Insearch, 2006a).

Several other Australian universities have followed the University of Technology, Sydney's example in offering vocational education and secondary level programs mainly although not exclusively for international students. The University of Wollongong established Wollongong College Australia in 1988 to offer English language, university preparation and diploma programs to international and domestic students. Monash University established Monash College as a wholly owned for-profit subsidiary in the 1990s and it now teaches diplomas at the university's Clayton, Caulfield and Peninsula campuses and also in Singapore, Guangzhou (China), Jakarta, and Colombo (Monash College, 2007). Monash University's English language centre mounts intensive language programs and the Monash University foundation year is an equivalent Australian year 12 program offered by Taylors College in Australia and other partners in Laos, Jakarta and Malaysia (Kuala Lumpur and Johor Bahru). The Australian National University has established ANU College as a registered training organisation which offers a foundation studies program, an ANU access English program, English language instruction for overseas students, extended university English, an advanced secondary studies program, maths bridging courses and group study tours. Charles Sturt University has established CSU Training as a registered training organisation to offer programs for its staff, industry and professionals in niche areas and to embed vocational qualifications within higher education programs.

Most Australian universities' vocational education programs are small in size, confined to 1 campus (Australian universities have an average of 3.4 campuses), comprise 1 or 2 disciplines, and many are offered through separate organisational units. They therefore have little if any impact on the university outside their immediate area. Dual sector universities first identified themselves as being distinctive in having to manage dual systems and processes to report to 2 levels of government since responsibility for vocational and higher education is split between the State and Federal governments. Where vocational education is a small part of a university's operations it can be handled as an exception to the structures, systems and processes established to handle higher education. But where vocational education is a substantial part of the university's operations a separate system has to be established to handle it. Vocational education must also be a substantial part of the university's student load to affect higher education.

'Substantial'

Dual sector universities have never specified the proportion of load needed in each sector to be considered 'substantial'. The issue can be put rigorously by asking: how high a proportion of total student load must vocational education be before it is no longer considered an exception and it is generally accepted as a normal part of the institution? Sociologists have proposed several analytical tools for examining when a phenomenon changes from being an exception to a norm: threshold models, bandwagon effects, contagion effects, epidemic theories and tipping point. The threshold or tipping point differs for each social trend but 20% is often observed (Wilson, 2006). So for the want of a better alternative one may posit that a university

is a dual sector university when at least 20% but no more than 80% of its load is in vocational education. The recognised dual sector universities are comfortably within these bounds, having these proportions of vocational education and training student load: Ballarat 29%, Charles Darwin 54%, RMIT 26%, Swinburne 51% and Victoria University 46%.

'University'

Australia has many non university providers which offer both vocational and higher education. Some were established as higher education providers and subsequently added vocational education programs to broaden the range of prospective students from which they could recruit. Others were established as vocational education providers and added higher education programs to follow their students up the educational ladder. Some of these institutions might be accurately described as dual sector, like some 'mixed economy' (HEFCE, 1995) further education colleges in the UK and some community colleges in Canada and the US that also offer baccalaureates.

But arguably dual sector universities are more complex than other dual sector institutions because of universities' research role. Consider the differences between higher education coursework and research programs with the differences between coursework vocational and higher education programs, which are tabulated below. Coursework vocational and higher education follow a curriculum that is specified in advance whilst research candidates' curriculum is developed with their research. Coursework students are taught in groups whereas research candidates are supervised individually or in a very small group. And coursework students have substantial contact hours each week whereas research candidates' formal teaching would typically be a meeting with their supervisor for one or two hours every week or fortnight. On other characteristics such as student independence there is a continuum from vocational to coursework higher education to research higher education. On other characteristics such as length of program coursework and research higher education programs are more similar than vocational education and coursework higher education programs.

Table 1: differences between vocational education, coursework higher education and research higher education programs

Characteristic	Vocational education	Coursework higher education	Research higher education
Curriculum	Specified in advance	Specified in advance	Developed with the program
Program length	6 months – 2 years	2 – 5 years	3 – 4 years
Orientation	Employment	Employment/ discipline	Discipline
Class size	Small to medium group	Large groups and some small groups	Mostly individual supervision
Contact hours per week	15 – 30	10 – 15	1 – 2
Student independence	Low	Moderate	High

Overall, the differences between coursework and research higher education programs are at least as big if not bigger than the differences between coursework vocational and higher education programs. They thus add considerably to the complexity of managing an institution. These are reflected in different appointment and promotion criteria for teaching and research and in different arrangements for facilities, support and central services for teaching and research.

Having a substantial research role therefore adds considerably to the complexity of institutions and therefore justifies dual sector universities distinguishing themselves from other dual sector institutions. But what amounts to a substantial research role? The new US Carnegie classification of institutions of higher education (Carnegie Foundation, 2007) defines doctorate granting universities as institutions that award at least 20 doctoral degrees per year. As will be seen from table 2, the University of Ballarat just satisfies this criterion and Charles Darwin University falls somewhat short.

Research adds a significant complexity to an institution not by its scale but by its size in proportion to the institution's other activities. Research intensity rather than research scale is salient for institutional complexity. Measures of research intensity commonly used in Australia are the proportion of full time equivalent students undertaking research higher degrees and research block grants as a proportion of total revenue. Charles Darwin does reasonably well on these measures because of its strength in tropic and desert knowledge. The University of Ballarat does less well and is generally understood to be one of the least research intensive of Australian universities. Nonetheless, it (just) meets the Carnegie Foundation's criterion for doctorate granting universities and it seems reasonable to conclude that both Ballarat and Charles Darwin universities have enough research activity to be classified as research-active universities.

Table 2: measures of research intensity of Australian dual sector universities, 2006

Indicator	Ballarat	Charles Darwin	RMIT	Swinburne	Victoria	All unis mean
% research load	1.8	4.6	3.6	3.4	2.8	5.0
PhD graduates	20	17	127	68	67	141
% research fund	2.3	3.8	4.7	3.7	2.8	8.6

Source: DEST (2007) *Students 2006 [full year]: selected higher education statistics*; Finance 2006: *selected higher education statistics*

Why did some universities develop as duals and others not?

Four of Australia's five dual sector universities developed from vocational education institutions: Ballarat, RMIT, Swinburne and Victoria University. Several other Australian universities also developed from vocational education institutions but discarded their vocational education programs to develop as single sector universities: Curtin University (which was formed from the tertiary programs formerly conducted in the Perth Technical College and which subsequently amalgamated with the Western Australian School of Mines), Deakin University (Gordon Institute of Advanced Education), Queensland University of Technology (Central Technical College), the University of New South Wales (Sydney Technical College), the University of South

Australia (South Australia School of Mines and Industries) and the University of Technology, Sydney (which developed from the Sydney Technical College 2 decades after UNSW separated from the college).

Other universities in the UK and the US also developed from vocational education institutions but discarded their vocational education programs as they acquired and strengthened their higher education programs. For example, the University of Bath traces its history back to the Bristol Trade School of 1856 and Carnegie Mellon University was established as the Carnegie Technical Schools in 1900. But as they developed their higher education programs and gained university status they relinquished their founding vocational education programs. The four Australian universities that retained their vocational education programs to become dual sector universities therefore seem anomalous. I suggest that 3 factors contributed to the development of dual sector universities in Victoria and not elsewhere: geography, the strength of college councils, and politics.

Geography

One might expect that dual sector institutions and universities would be established in the smaller population centres that could support one dual sector campus but not two tertiary education campuses. However, most dual sector universities emerged from technical colleges that developed strong upper level programs. They therefore had to be in a population centre big enough to generate enough demand for vocational higher education of a type not adequately supplied by the local university. This explains why most of the technical colleges outside Melbourne and Sydney did not develop into dual sector institutions. While the dual sector University of Ballarat is located in rather small city of some 90,000, at the time of the establishment of its antecedent Ballarat School of Mines and Industries in 1870, Ballarat was a major population and manufacturing centre due to gold mining.

College councils

Many vocational education institutions in Victoria were founded as a result of the financial contributions and political activism of industrialists and philanthropists, who formed and occupied positions on the institutions' councils or governing bodies. The philanthropist Francis Ormond was a founder of the Working Men's College which became the dual sector RMIT. George Swinburne was a founder of the Eastern Suburbs Technical School which became the dual sector Swinburne University of Technology, and other powerful figures contributed to the establishment of vocational education institutions in Footscray (which became the dual sector Victoria University) and elsewhere. These institutions' councils directed the development of their institutions to further the interests of the institutions and the communities they served, which was not always consistent with the policies of government departments.

Vocational education institutions in other States did not have councils or even community advisory bodies until recently, and consequently their development was much more subject to government departments' policies. This restricted and in some cases blocked institutions' aspirations to offer programs outside the scope determined by the relevant government department. The lack of an independent council and a continuity of influential supporters made institutions in other States much more

vulnerable to government decisions that disadvantaged the institution, such as splitting vocational and higher education parts into separate institutions. This happened to Sydney Technical College twice. Its higher level programs were first split off in 1949 to form the New South Wales University of Technology which became the University of New South Wales in 1958. It happened again to the college two decades later in 1969 when the NSW government reconstituted the advanced programs of Sydney Technical College as a new institution, the New South Wales Institute of Technology, which became the University of Technology, Sydney in 1988.

Conservative Victoria and Labor NSW

While the Australian Government set the framework for the delineation of tertiary education sectors, until recently institutions' development was determined by State governments. State Governments have had very different political histories, and I suggest that this was a factor in the development of dual sector universities in Victoria but not in New South Wales.

The Australian Labor Party was founded in 1891 but did not win office until it formed the federal government for three months in 1904 and then for six months in 1909. The first sustained Labor governments won office in 1910, in NSW for six years, in Western Australia for five years, in South Australia for two years and federally for three years. As shown in table 3, from the period since 1910 Labor formed government for 30 per cent of the time in Victoria, the lowest of any jurisdiction. In contrast Labor held office for 61 per cent of the time since 1910 in New South Wales. The civic institutions in Victoria have therefore been overwhelmingly shaped by conservative governments and the citizens who elected them, while in New South Wales they have been overwhelmingly shaped by Labor governments and voters. The formative period of the tertiary education sectors in Australia has been since 1945, when conservative governments and citizens have again dominated Victoria and Labor governments and voters have dominated New South Wales.

Table 3: percentage of time since 1910 and 1945 that the Australian States and the Commonwealth have been governed by the Australian Labor Party

Jurisdiction	Since 1910	Since 1945
Victoria	30	36
South Australia	39	44
Commonwealth	41	33
Western Australia	51	43
Queensland	56	56
New South Wales	61	70
Tasmania	66	74

The interaction between institutions' councils and State Governments' political orientation is seen in New South Wales and Victoria's handling of proposals to establish technological universities in their State. The NSW Labor Government was sympathetic to the aspirations of the higher education division of Sydney Technical College to form a technological university. While the college did not have a strong council to advance the aspirations of the college to be made the new university, neither was there a strong council to oppose the splitting of the institution, an outcome opposed by its supporters.

The conservative Victorian Government was attracted to the financial savings of forming a technological university out of Melbourne Technical College as RMIT was then known, but this was not sufficient to overcome its view that such a development would be second best and, it feared, second rate. This feeling was reinforced by the advocates for a totally new institution repeating in Victoria the disparaging appellation of the then New South University of Technology as 'Kenso Tech'. The Melbourne Technical College council promoted its institution's aspirations very vigorously publicly, before Government enquiries and in private lobbying, but it was associated with vocational rather than higher education.

Conclusion: the prospect of new dual sector universities

While Australia's dual sector universities have merged with other institutions, most with several, most originated as vocational institutions and became dual sector universities by developing higher level programs and functions over time. That is, they became dual sector institutions by developing from the bottom up. The current dual sector universities may follow the other universities that developed from vocational education institutions and subsequently discard their vocational education programs to concentrate on higher level programs and research. However, that seems unlikely at present because the trend seems to be towards vertical integration, not disintegration. This may be observed in other vocational institutions that are following a similar trajectory as dual sector universities.

From 2005 the Australian Government started offering income contingent loans for students occupying full fee paying places in higher education programs in public and private institutions. This has greatly expanded the number of degree places offered by private providers, including providers that had hitherto offered only vocational education programs because of their lower market entry barriers. Some TAFE institutes are also offering degrees. The private providers are not required to report complete enrolment figures and enrolment figures are not published separately for individual TAFE institutes, but it seems that the biggest secular vocational institutions have only 100 or 200 students enrolled in higher education programs. However, this provision is expanding fast and is a potential route for the development of dual sector institutions in the medium term and dual sector universities in the long term.

Another possible development of a dual sector university is from the top down. Several single sector universities have been introducing vocational and secondary education programs: we have seen that the University of Technology, Sydney, the University of Wollongong, Monash University and the Australian National University amongst others offer English language, year 12 and diploma programs mainly to international students but also to domestic students. It is hard to know the size of these developments since they are typically established as separate companies which are not required to report even standard information such as enrolment figures. However, the most recent annual report of the largest such body Insearch (2006b), the feeder college of the University of Technology, Sydney, notes that 'during 2006 . . . over 1100 international students progressed from Insearch English and academic courses to undergraduate and post-graduate degrees at UTS.' This would be almost five per cent of University of Technology, Sydney's total student load of 23,000 full time equivalent students, and so the university would have to expand Insearch four-fold to conform to

the Australian understanding of a dual sector university. Nonetheless, this is a possible route to the development of a dual sector university: from the top down.

A similar development has been entertained by the vice chancellor of Central Queensland University. The university is located in a region with an estimated resident population of 190,000. Most Australian university students do not relocate to study, so university planning bodies have proposed that a local population of at least 200,000 people is needed to sustain a university. Since the population of Central Queensland is rather less than that and the population within ready commuting distance of the university's foundation campus at Rockhampton is only 70,000, Central Queensland University could not be sustained as a conventional university. It therefore introduced distance education soon after it was founded and more recently it has established a network of campuses in Brisbane, the Gold Coast, Sydney and Melbourne which enrol mostly international students. A recent downturn in international student numbers has made the university vulnerable and the vice chancellor has discussed the possibility of ensuring its viability by becoming a dual sector university (O'Keefe, 2007).

Another possible development is by several large universities based in capital cities such as Deakin, La Trobe and Monash universities and the universities of South Australia and Tasmania. These have established or taken over campuses in small regional centres with populations of less than 100,000 and some even in towns of less than 50,000 people. These are clearly not sustainable and require substantial and draining cross subsidies from the universities' main campuses. An obvious possibility is to amalgamate the regional university campus with the region's technical and further education institute, most of which are already well established and viable. Some regional university campuses are co-located with TAFE campuses, and universities with regional operations propose more effective partnerships with TAFE. But university co-locations and partnerships with TAFE still maintain separate teaching staff, administrations and facilities which make them less efficient than combined operations. A more efficient and effective option would be a full amalgamation of tertiary education institutions in each region to form a dual sector tertiary institute, university campus or university college.

Regardless of whether the possibilities canvassed in this section emerge, it seems that dual sector developments are likely to be active in Australia for some time yet. So while vocational education in a dual sector institution may currently be anomalous, it seems likely or at least possible to be an augury of future development of dual sector provision.

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