This paper considers how to implement the policy of the Australian Commonwealth and State ministers for education and training to improve transfer from vocational education and training to higher education. It argues that transfer of students is more important than transfer of credit and considers what may be learned from the US where student transfer has been a core issue for higher education since the establishment of the first 2-year college in 1901. The paper concludes by drawing some analytic points from the emergence of vocational schools in Europe in the late Middle Ages.

Introduction

On 11 July 2003 the Commonwealth and State ministers for education and training (MCEETA, 2003) announced that they –

i agree to work with the Commonwealth to develop national arrangements for articulation and credit transfer between the higher education sector and the vocational and training sectors;

The Commonwealth minister Dr Brendan Nelson has recently been quoted as reiterating his wish for more credit transfer from vocational education and training to higher education (Maiden, 2004), and the minister has frequently sought to persuade prospective students and parents to redirect their preferences from higher education to vocational education and training (Nelson, 2002a, b).

We may readily agree with Cotgrove (1958, p 193, fn 1) that Banks’ (1955, pp 202, 214) observations about English secondary modern and technical schools apply to vocational education and training –

Nor can we discount the prestige that a school borrows from the range of occupations for which it normally prepares . . . . the middle class parent . . . will not accept either the modern or the technical school as equal in status to the grammar school until they offer to their pupils an equal opportunity to reach those occupations of higher social prestige which have always been associated with the grammar school.

Nonetheless, transfer from vocational education and training to higher education will become more important if the Commonwealth diverts students from higher education to vocational education and training by, for example, restricting the supply of higher education places it supports. But transfer involves 2 issues which are often confused.

Transfer of students and transfer of credit

The first issue in transfer from vocational education and training to higher education is the transfer of students. The table below shows the proportions of applicants of different types who were offered and enrolled in a university place through the Queensland
Tertiary Admissions Centre and the Victorian Tertiary Admissions Centre for admission in 2003. Only Queensland and Victoria report these data on their web site.

It will be noted, first, that offers were made to 62% of Victorian school leaver applicants but only 50% enrolled (or deferred), suggesting that 12% of Victorian school leaver offers were of a low preference for these applicants. The offer rate for Victorian applicants who completed a higher education qualification was somewhat lower but the enrolment rate was much lower, suggesting that further study was more discretionary for graduates who declined to accept lower preference offers. But the offer rate for Victorian applicants with a completed tafe qualification was much lower and the offer rate for Victorian applicants with incomplete tafe qualifications was the second lowest of applicant types, being above only unqualified applicants.

The offer and enrolment rates for Queensland were much higher than Victoria’s reflecting less pressure on places in that State, and the outcomes for Queensland applicants with a completed tafe qualification were outstanding. However, the offer and enrolment rates for Queensland applicants with an incomplete tafe qualification were the lowest of the applicant types.

<table>
<thead>
<tr>
<th>Applicants</th>
<th>% offered</th>
<th>% enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qld</td>
<td>Vic</td>
<td>Qld</td>
</tr>
<tr>
<td>School leaver</td>
<td>28,682</td>
<td>43,620</td>
</tr>
<tr>
<td>Completed higher education studies</td>
<td>2,705</td>
<td>4,034</td>
</tr>
<tr>
<td>Incomplete higher education studies</td>
<td>10,653</td>
<td>8,254</td>
</tr>
<tr>
<td>Completed tafe studies</td>
<td>2,064</td>
<td>6,843</td>
</tr>
<tr>
<td>Incomplete tafe studies</td>
<td>2,257</td>
<td>1,747</td>
</tr>
<tr>
<td>Other non school leaver qualified</td>
<td>5,496</td>
<td>587</td>
</tr>
<tr>
<td>No qualification</td>
<td>1,462</td>
<td>1,055</td>
</tr>
<tr>
<td>TOTAL</td>
<td>53,319</td>
<td>66,140</td>
</tr>
</tbody>
</table>


This suggests 3 conclusions. First, any national pattern in the transfer of tafe students to higher education is very broad. There are considerable differences between these 2 populous States probably due to the different pressure on places, the different treatment of tafe applicants in the 2 States and the different selection policies of each institution. Elsewhere (2002) I have reported that the group of 8 Australian universities with the biggest research budgets admit only 2% of their students on the basis of tafe qualifications, a quarter of the proportion admitted by the other universities. Secondly, applicants with incomplete tafe qualifications fare much worse than all other applicants.
with previous studies, particularly in comparison with applicants with incomplete higher education qualifications. This probably reflects considerable ignorance of tafe studies amongst higher education selection officers and more generally, but whatever the reason, it is a major problem for tafe transfers.

Thirdly, the proportion of each applicant type offered a place is influenced primarily by public policy and only secondarily by likelihood of success or some other educational consideration. Students who have already succeeded in higher education are more likely to succeed in subsequent higher education studies than other types of applicants, yet school leavers enjoy higher offer rates. This is presumably due to the priority all governments give to achieving successful outcomes for school leavers and I do not argue that this is a misplaced policy or poor practice. But it does suggest that increasing student transfer from vocational education and training to higher education will raise difficult policy issues for governments.

The transfer of credit for vocational education and training arises only for students who have been admitted to higher education. Cummins, Rutten & Wagstaff (1999, table 6.1) report that 43% of students admitted to higher education in 1997 on the basis of prior tafe studies were granted some credit for their previous tafe studies. However, 4 times as many students with previous tafe studies were admitted on some other basis and of all students with prior tafe studies only 17% received credit for their prior tafe studies (Cummins, Rutten & Wagstaff, 1999, tables 4.1 & 4.2).

Unfortunately the amount of credit granted is reported as a proportion of the program which the student is beginning, not of the studies which the student has completed. So it is not possible to estimate how much study may be repeated by students transferring within the same or similar field. Nonetheless, the proportion of transfer students receiving credit of any amount seems rather low. Harris, Sumner & Rainey (2004, p 15) report, ‘not all students apply for credit. For those moving in either direction, reasons include a realisation that none of their prior studies are relevant for credit, perhaps because of movement to a different field of study or being prepared to repeat studies. . . . However, for students moving in either direction, credit transfer may simply not be seen as an important issue as Golding found from his research’.

Should transfer from vocational education and training to higher education become as important an issue in Australia as the Commonwealth and State ministers suggest, it would be instructive to examine the experience of the US, where transfer has been a core issue for higher education since the establishment of the first 2-year college, Joliet Junior College in Illinois in 1901.

**Transfer policies in the US**

Student transfer from sub baccalaureate programs, institutions and sectors to baccalaureate programs, institutions and sectors is particularly salient in many US states which restrict the number of State funded places in the comparatively more expensive baccalaureate programs and institutions. California has a particularly strong policy of restricting enrolments in its more expensive University of California and California State University: 70% of public tertiary education enrolments are in California community colleges (California Postsecondary Education Commission, 2003). Furthermore, while most US states regard reasonable access to a community or 2-year
college as commuting distance, relocation is widely considered reasonable to attend a baccalaureate granting institution.

Transfer from 2-year to 4-year programs is therefore fundamental to advancing the equity of the whole system in many States and it has been the subject of extensive study and public policy. For example, the California Postsecondary Education Commission (2002, p 25-7) and its predecessor published 28 papers on student transfer since 1979. In 2001 the Education Commission of the States (2001) found that of the 50 US States, 30 had legislation supporting transfer, 40 had Statewide cooperative transfer agreements, 33 States regularly collected and reported transfer data, 18 States offered incentives and rewards to either transfer students or sending or receiving institutions, and 26 States maintained a Statewide guide to transfer.

All US baccalaureates are of 4 years’ equivalent full time study and most have three basic components: general education which typically includes English, quantitative methods, civics, and liberal arts and sciences; major program requirements which comprise the discipline’s main studies; and electives. Some 23 States prescribe a common core curriculum and examinations in general studies to maximise the transfer of credit between institutions, and 8 States specify common subject numbering to eliminate ambiguity in which subjects are transferable.

### Table 2: US States’ Instruments to Support Student Transfer

<table>
<thead>
<tr>
<th>Types of Policies</th>
<th>Number of States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislation</td>
<td>30</td>
</tr>
<tr>
<td>Statewide cooperative agreements</td>
<td>40</td>
</tr>
<tr>
<td>Transfer data reporting</td>
<td>33</td>
</tr>
<tr>
<td>Incentives and rewards</td>
<td>18</td>
</tr>
<tr>
<td>Statewide transfer guide</td>
<td>26</td>
</tr>
<tr>
<td>Common core curriculum</td>
<td>23</td>
</tr>
<tr>
<td>Common subject numbering</td>
<td>8</td>
</tr>
</tbody>
</table>


These policies can be successful. The Texas Higher Education Coordinating Board (2001, pp 16, 32) reports that the State specifies (‘mandates’) a common core curriculum and common subject numbering in its legislation and subordinate requirements and that in 2000 Texas community college students presented with an average of 1.7 years’ equivalent full time study and were granted credit for 1.2 years equivalent full time study or 70% of the study they had completed. However, much of US States’ policies seems to be exhortatory. Of the 30 States with legislation supporting transfer, only 6 States specified minimum conditions for the transfer of students and only 7 other States specified even minimal conditions for the transfer of credit. Ten States required a transfer agreement without specifying what it might contain, 7 States exhorted cooperation in transfer and 2 States stated in legislation broad support for transfer.

Wellman (2002) studied 6 US States that rely heavily on transfer from 2-year colleges to give low-income students access to the baccalaureate degree. Wellman (2002, p vi) selected 3 States which received high grades and 3 States which received low grades on retention and degree completion in *Measuring up 2000*, the State-by-State report card for
higher education released by the National Center for Public Policy and Higher Education (2000). Wellman (2002, p v) examined the role of State policy in influencing community college–baccalaureate transfer. She (2002, p 38) characterised State policies as –

structural (policies that affect the overall approach to postsecondary education) and academic (policies specific to 2/4 transfer). Structural policies determine governance, institutional and sector mission and differentiation, statewide information system capacity, funding, planning capacities, and accountability strategies. These structural policies, along with demography, economic conditions, and institutional histories, determine the preconditions of student transfer activities. Academic policies, in contrast, are designed to influence the internal business of alignment between students, programs, and courses [subjects] within and across institutions. Academic policies concern admissions standards, curriculum requirements, articulation, and transfer of credit.

Wellman (2002, p vi-vii) found that the key difference between the 3 high-performing States and the others seems to lie in the Statewide governance structure for higher education. The low performing States construct transfer as mainly an academic and institutional matter and grant institutions considerable autonomy while the high performing States of Florida, New York, and North Carolina have a comprehensive, integrated approach to transfer implemented by stronger State governance or coordinating mechanisms. For example, the 16 public baccalaureate-granting institutions of North Carolina are part of the University of North Carolina and the State’s 58 public community colleges form the North Carolina Community College System governed by the State Board of Community Colleges. In New York public community colleges are part of either the State University of New York or the City University of New York and thus report to the same governing board as the 4-year institutions, which Wellman (2002, p 39) says may facilitate transfer within those sectors. However, Prager (1993, p 551) found in her study that transfer within such institutions can be as difficult as transfer between segmented institutions.

Wellman (2002, p vii) also found that all 3 of the high performing States also use data better to improve transfer performance, including reporting to campuses about their performance relative to others. This echoes Rifkin’s (1998, p 6) finding that ‘Effective transfer programs benefit from a well-developed technical infrastructure that includes statewide student information and tracking systems, articulation databases and research on transfer. The most effective programs have all three and often are found in states where higher education is closely coordinated at the state agency level . . .’ However, the States’ ‘accountability structures typically focus on 2-year college transfer performance instead of also looking at the responsibilities of the 4-year institutions’ Wellman (2002, p vii).

In contrast to the large differences in structures between the States, Wellman (2002, p 39) found that ‘There is a good deal of commonality between the states on the academic policy side of the equation, as they have all adopted similar approaches to core curriculum, transfer of credit, remediation and testing, and statewide articulation agreements and course catalogues.’ However, she concluded that academic policy alone is not sufficient to achieve strong transfer.
Some historical and analytic foundations

Notwithstanding the importance of transfer in the US, ‘community or two-year colleges have many functions in addition to transfer preparation, such as adult, vocational, continuing, community, and remedial education’ and these divert 2-year colleges from their transfer function (Wellman, 2002, p 1). Likewise, in Australia since 1992 State and Commonwealth Governments have concentrated the national vocational education and training system on preparation for work, which imposes 2 obstacles to developing transfer to higher education: vocational education and training programs are designed to develop workplace skills, not study skills needed to succeed in higher study; and the sector is designed to maximise employment outcomes rather than transfer to higher education. Australian vocational education and training had multiple roles before 1992, established systematically and nationally by Kangan in 1974 and which developed organically from institutions’ different histories before then (Goozee, 1993). It would be possible to reconstruct a transfer role for Australian vocational education and training from its history before 1992 or to develop one by analogy from the current roles of US 2-year colleges. However, some interesting points may be learned from the emergence of vocational schools in the late Middle Ages.

Formal education in Europe during the Middle Ages was provided by the monasteries which educated their pupils for religious duties and by apprenticeships (Bennett, 1926, pp 21, 266). England established a national system of apprenticeships remarkably early with the Statute of Artificers of 1562. Apprenticeships had 3 characteristics which became anachronistic after the industrial revolution (Bennett, 1926, p 266). Apprenticeships were based on the handicraft mode of production, while the first industrial revolution was distinctive not in its introduction of power and mechanisation, but in its introduction of factory production. Secondly, the apprenticeship as with all other relations of the trade was long term, normally 7 years (Bennett, 1926, p 21), and terms including price were based on ‘custom’, or those traditionally accepted as just. One of the critical changes in England from the Napoleonic Wars was to set prices by supply and demand and establish terms by contract ‘freely’ negotiated separately and for the rather short duration of each transaction (Thompson, 1980, p 260).

Thirdly, apprentices normally lived with their master’s family. The relationship between a master and their apprenticeship established by the indenture was of guardianship or custodian of the apprentice’s whole development rather than the narrow employment relationship of the factory. So masters were expected to give their apprentices moral, religious and civic instruction as well as teaching their craft’s technical skills and introducing their charges to the ‘mysteries’ of their trade (Bennett, 1926, p 21). Some guilds even required masters to teach their apprentices how to read and write (Bennett, 1926, p 267) and masters who didn’t have the ability or time to fulfill this responsibility personally did so by sending their charges to continuation schools established for this purpose.

Among the upheavals of the Industrial Revolution was the collapse of the apprenticeship system and in 1814 to the repeal of the apprenticeship clauses of the Statute of Artificers, which had been on the statute books for 252 years. Apprenticeships were replaced, at least partly, by Sunday schools, part time schools and factory schools.
In 1791 ‘schools of industry’ were established in England as a substitute for apprenticeships (Bennett, 1937, p 46). France established its Écoles Nationales d’Arts et Métiers in 1799 and its École Centrale des Arts et Manufactures in 1829. A very influential model was Russia’s School of Trades and Industries established in 1830, which became the Imperial Technical School in 1868 (Bennett, 1937, 14).

At about the same time the London Mechanics Institution (1924) was established inspired by Birbeck’s lectures. The main purpose of these institutions was to disseminate ‘useful knowledge’ but even so their courses were limited to instruction in the scientific principles underlying a craft and did not include instruction in the craft itself (Cotgrove, 1958, p 13). Practical trade instruction in workshops was opposed both by employers who feared that they would sell their output at subsidised prices (Cotgrove, 1958, p 36) and by unions which feared that they would produce too many and too cheaply skilled workers who would depress wages and working conditions (Bennett, 1937, p 518). While the mechanics institutes did not survive their original purpose beyond 25 years, they ‘were particularly important as early examples of further technical instruction for their influence on later developments’ (Cotgrove, 1958, p 13). The industrial revolution was not as quick and extensive in Germany, hence its guilds and apprenticeship system remained (Bennett, 1937, p 193) to form Germany’s modern dual system of post compulsory education.

From this quick review we can posit 2 analytic distinctions. First, one may distinguish training for a job, for a vocation, for a career and training for life. Medieval apprenticeships were clearly training for a vocation – from apprentice to journeyman and then to master – but also training for life in their inclusion of moral, religious and civic instruction. Secondly, educational institutions may provide education and training that complements, substitutes or is an alternative to training for a job. Thus the pre Industrial Revolution continuation schools complemented the on the job training of apprenticeships, but in teaching literacy they provided education for life as well as enhanced career prospects. On the other hand, England’s schools of industry and France’s Écoles Nationales d’Arts et Métiers were substitutes for apprenticeship systems heavily eroded if not completely destroyed by the Industrial Revolution. The mechanics institutes provided education for a career and for life as alternatives to apprenticeships.

Conclusion

The sterile dualism of vocational and general education can be overcome by considering vocational education and training’s role in preparing students for a vocation and a career. It may also be possible to separate parts of vocational education and training that complements, substitutes and is an alternative to training for a job. From both it may be possible to construct a vocational and career development role that complements training for and on the job. Such a role would be better suited to supporting transfer to higher education than the sector’s current unitary role of preparing students for work.
References


Texas Higher Education Coordinating Board (2001) ‘Table 10 average SCH presented for transfer from colleges and universities and average SCH accepted and applied to