

## **A further local participation study: TAFE and ACE in Melbourne postcodes**

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A previous paper (McIntyre 1999) reported empirical findings from an analysis of TAFE participation patterns in greater Sydney using 1996 data and socio-economic census data mapping using ABS CData96 (ABS 1998a). That study followed from the thesis that national policy is neglecting local and regional factors and that VET research needs to engage with socio-economic variations in participation through local equity analysis (McIntyre 2000). The article recommended a focus on the geographical distribution of target equity groups who are often concentrated in clusters of postcodes with a profile that is disadvantaged, as judged by indicators of family income, employment and educational qualification.

Such studies are recommended against the background of a critique of equity policy constructs such as the ‘representation’ of ‘target equity groups’ which appear to be designed to soften the confronting trend to increasing social and economic inequality. VET researchers have clearly pointed out the shallowness of ‘equity’ in VET policy by pointing to the compounded nature of social and economic disadvantage—the statistical association of low educational levels, poor employment, poverty, isolation and cultural group affiliation (Golding & Volkoff 1997, Volkoff & Golding 1998, McIntyre 2000).

### **The Sydney postcode study**

The earlier study aimed to compare Sydney postcodes in terms of various rates of TAFE participation and to examine differences among high and low participation postcodes. The objective was to determine to what extent TAFE participation in Sydney postcodes reflected the employment and educational levels of their residents, particularly in disadvantaged areas. A secondary question was whether equity groups known to be concentrated in a given postcode are represented among TAFE participants residing in that postcode. No assumptions are made about where these residents attend TAFE.

The Sydney and Melbourne postcode studies are examples of ‘area participation analysis’, one of several forms of locality analysis (McIntyre 2000). This method compares a large number of areas on their rate of participation for a given year and their VET client profiles, as distinct from ‘provider catchment analysis’ which examines to what extent these participants attend a local provider (for an ACE example, see McIntyre Brown & Ferrier 1996). Differences in among high and low participation postcodes can be examined in terms of social and economic indicators known to be associated with adult participation, such as higher levels of education, occupation and income. From an equity perspective, the question is not only about the participation rates of disadvantaged postcodes but whether disadvantaged individuals from these postcodes are represented in provider client profiles. A third kind of analysis looks more closely at catchment and local participation to establish to what extent a provider is successfully reaching ‘target equity groups’ living in the area.

Some terms need definition. A *TAFE participation rate* is calculated by expressing the number of net students enrolled in TAFE in a given year as a percentage of the adult population (defined as those aged 15 and over, as estimated from a 1996 census count or more recent ABS surveys). Net students not enrolments are used. A *TAFE postcode participation rate* expresses the total number of clients living in a postcode as a percentage of the postcode’s adult population in the reference year. Similarly, and given adequate client data, ACE and private VET participation rates can be calculated. The term ‘disadvantage’ is problematic, but here

socio-economic disadvantage is meant, as measured for areas using some index calculated for areas (ABS 1998b) or selected social indicators such as level of qualified residents in a postcode. Regarding VET participants, AVETMISS provides individual client data that can be taken as markers of underlying socio-economic disadvantage namely unemployment and low level of schooling. For comparability with census data, the reference year is 1996.

The Sydney postcode participation study found that 1996 TAFE participation in Sydney is highest in the outer Sydney postcodes of outer western and southwestern suburbs, and lowest in the more affluent inner city suburbs, which have higher university and ACE participation. Outer south-western and western Sydney postcodes include many areas regarded as disadvantaged in terms of social indicators such as post-school qualifications, lower labour market participation, greater unemployment and lower household incomes.

The study also compared rates of participation including: the proportions of TAFE clients from a postcode who are enrolled in stream 3000 and 4000 courses as distinct from educational preparation, Stream 2000. Other measures include the proportion of clients who are employed or those unemployed and the proportion of clients with low educational level, estimates made possible by the reliable data furnished by AVETMISS. Such measures indicate, at least on the face of it, to what extent socio-economically disadvantaged individuals were participating in TAFE.

In Sydney, those postcodes with high TAFE participation were shown to have higher levels of participation by these groups. Those postcodes which are high on social indicators of non-English speaking background have in general, high NESB TAFE participation rates. Postcodes with relatively large populations of indigenous people also have high ATSI participation rates. The most striking finding illustrated by a map in the 1999 paper was that in 1996 there were high rates of participation by TAFE students of NES background in those inner western Sydney postcodes which the 1996 census showed had high concentrations of people born overseas in NES countries. In some NES postcodes, the proportion of NES TAFE clients was as high as 60% or over. This suggested that local populations of NES residents were enrolling in TAFE in significant numbers and in South Western Sydney providers are successful in achieving high levels of access, if not outcomes, for many groups of NESB clients.

The Sydney study suggested several questions for further analysis, particularly how far local providers' equity strategies are being reflected in local patterns of participation, particularly in disadvantaged areas. It is particularly important to closely analyse equity strategies of TAFE institutes at the campus level to establish to what extent they are responding to 'compound disadvantage' rather than nominal equity status (for example, whether an individual is of non-English speaking background). The high rates of local NESB participation may reflect the success of highly motivated and *relatively advantaged* NESB students accessing TAFE. Of course, as has often been pointed out, access does not mean course success or an equitable outcome.

Further, it is necessary to have fine-grained local studies in order to discover just how much of the TAFE participation in local postcodes occurs in local TAFE providers. The claims for greater policy emphasis on the 'community dimension' of VET of course rests on the assumption that much participation is local. The rationale for community studies would be invalidated by any great tendency for TAFE participants living in a provider's nominal catchment to participate outside the region. A recent NCVER study of distances travelled to TAFE confirms that the general pattern is for the great majority of participants to travel less than 20 km from their home to attend a course (NCVER 1999). Fine-grained local analysis can check to what extent this is so in a given locality by provider client profiling which can also answer questions about the kinds of courses that disadvantaged individuals might be enrolling in. The Sydney study suggested there were marked differences in Stream 3000 or 4000 and Stream 2000 participation depending on postcode socio-economic status.

Provider local equity strategies are being explored in an UTS-RMIT study in partnership with South Western Sydney Institute of TAFE and Chisholm Institute of TAFE, South Eastern region of Melbourne funded by the National Research and Evaluation Council (McIntyre & Volkoff in progress).

## **The Victorian context**

State and territory differences are frequently glossed over in the process of achieving consensus on national policy frameworks, when such differences might tell us much about what structures, policies and resourcing strategies make a difference to equity outcomes. It is especially interesting to compare the records of different kinds of providers in different states where this is possible. One state where this is possible is Victoria since it has a well-developed TAFE, community and private provider networks.

Victoria is particularly interesting because there is good data permitting a comparative analysis of the clients of TAFE and ACE providers and the roles different providers may play in equity for potentially different clienteles at the local level. Historically, Victorian TAFE had a dual system of autonomous institutes and many technical schools that was different from the highly centralised but locally diffused NSW TAFE system. Victorian ACE has vigorous grassroots tradition and has over 400 mostly small providers, where NSW has 75, with Sydney dominated by a small number of large 'community colleges' based on the old evening colleges. Victorian ACE has a stronger ethic of community-based practice, is better integrated into VET planning and better resourced in comparison to NSW, and competes more with TAFE at the local level.

Thus participation patterns in Melbourne are likely to be complex; with interesting questions about how its many neighbourhood houses and learning centres relate to TAFE Institutes and to what extent they compete for clienteles or perform complementary roles. It may be that ACE performs important functions in bridging disadvantaged clients to employment and training in TAFE institutes, and pathways research has substantiated the Victorian claim they do so (McIntyre & Kimberley 1997), despite an ACE participation literature that shows adult education in general does not (SSCEET 1998). Thus, postcode participation patterns might reflect the interwoven nature of TAFE and ACE participation.

Another important relationship is signified by the term 'further education' which is used in Victoria alone (eg ACFE 1999), where ACE has carried to a great degree the language and literacy provision, reflected in high Stream 2000 and 3000 participation. The extent of overlap and competition between TAFE and ACE has increased due to both expanded ACE accesses to accredited VET delivery and the Kennett Government's dedication to competitive tendering of VET. This direct competition is rare in other states.

Without idealising Victorian ACE, it is possible that the comparative strength of its network may facilitate the development of equity strategies and outcomes, through a provider culture that is more responsive to the needs of local labour markets and social groups. An additional complication is that the very role that Victorian ACE organisations have claimed for themselves in achieving equity through targeting disadvantaged clienteles may mean that there have been less incentive for TAFE institutes to develop local strategies to address localised disadvantage.

Questions of this order call for analysis of patterns of participation at the local level, which are likely to be different from those in NSW where our research has established the marked differentiation of TAFE and ACE clienteles by postcode of residence (McIntyre Brown & Ferrier 1997, McIntyre 1999). To what extent then, does the co-existence of ACE and TAFE in Victoria encourage a differentiation of VET clienteles? What might postcode patterns of participation tell us about the inter-relation of community and TAFE providers in Melbourne?

## **Trends in Melbourne postcodes**

The Melbourne study first calculated separate participation rates for ACE and TAFE and a combined (public) VET participation rate. Thus a postcode might have (a) a high TAFE participation rate and a high ACE participation rate with a high overall combined VET participation rate. (High means relative to the average for Melbourne, not defined further here), or (b) either a high TAFE participation rate and a low ACE participation rate, or vice versa, or (c) a low ACE participation rate and a low TAFE participation rate. In the last case, the overall effect is a low combined or 'VET participation rate'.

The procedure then is to create a map of Melbourne postcodes and examine participation patterns in relation to socio-economic characteristics. The mapping of social indicators generated from census tables for a set of postcodes is made possible by the integration of census tables with geographic information systems software in CData96 (ABS 1998a). Counts of net students are combined with census counts to give participation rates which can then be mapped using CData96. Figures 1-3 provide examples of this methodology, which is capable of greater refinement than these first examples suggest. In these examples, postcode participation rates are mapped on to the 'underlying' map of variations in some social indicator, here, the proportion of the adult population aged 15 and over who held a post-school qualification in 1996 ('qualified' for short). Other measures, particularly household income are useful in mapping socio-economic variations (see McIntyre Brown & Ferrier 1997) and there are questions about how 'disadvantage' is to be defined using census data that are raised by such mapping. Again, this paper does not go into the technical details of this approach, including the possible use of disadvantage trage indicators (but see below). The analysis is broad and preliminary in character, and necessarily over-simplifies the complexity of socio-economic variations found within a postcode, as well as the trends in participation. Once a general picture is established, it is then possible to pursue fine-grained analysis of variations within urban regions of Melbourne.

Some limitations of this first analysis need to be noted. First, it did not examine all greater Melbourne postcodes (179 postcodes were studied), so outer Western Melbourne and other high TAFE participation areas are not included. Second, some postcodes were deleted from the analysis due to the limitations of Cdata96 (which builds postal areas from small census collection districts, so that population data is not available for certain postcodes). Third, some postcodes given by VET clients refer to post offices (eg. 3001) making it difficult to identify their home postcodes. Fourth, there are sources of error due to various factors such as the use of 'place of enumeration rather than 'usual residence' in census data, affecting some postcards more than others. If extrapolation to current trends is considered, then some postcodes will have changed more markedly than others in their population characteristics, particularly outer suburban areas. Finally, it is important to note that in comparing TAFE and ACE participation, net students are the basis for calculating rates. This eliminates the inflation of participation that would arise if enrolment were used, since an individual can have multiple enrolments in any year. Nevertheless, there is a difference in the course duration represented by TAFE and ACE students, since ACE offers many short courses. Again, all references are to 1996 data.

The maps given in Figures 1-3 are to be read in relation to the tables of participation rates and socio-economic indicators given in the Appendix. There are obvious limitations with maps in that they convey thin slices of information graphically, make only broad comparisons across Melbourne postcodes, and exclude some outer postcodes for the sake of intelligibility at a certain scale of representation.

The maps clearly suggest that there are socio-economic variations in VET (TAFE and ACE) participation in Melbourne, though the picture is a complex one. Many postcodes have a participation rate that must be considered high by Australian standards, with few less than 8.0% and many more over 15%. It is likely that these trends will also be found in Melbourne postcodes excluded from this analysis.

1. *High VET participation.* Forty postcodes with the highest 1996 VET rates are shown in Table 1. The highest rates fall in the range 13-25% with Selby (3159) exceptional (about 40%). In general, high rates are due to both high TAFE and ACE participation. The exceptions are Broadmeadows (24.8), Box Hill (20.6) and Dandenong (13.5) where TAFE accounts for most of the rate, as suggested by the ACE-TAFE ratio (the proportion of ACE students to TAFE students attending in 1996). Postcodes where high VET participation is mostly accounted for by ACE include Wattle Glen (23.2, ACE-TAFE ratio, 0.83), Park Orchards (20.4, 1.52) and Kangaroo Ground (17.9, 1.14). Figure 1 maps these broad patterns on to the distribution of the 'qualifications' social indicator (the proportion of persons aged 15 and over holding a post-school qualification in 1996). It is notable that large TAFE institutes seem to account for high local participation (eg Broadmeadows and Box Hill). Overall VET participation is varied across the socio-economic status of different areas. Thus disaggregating TAFE and ACE is necessary.

2. *High ACE participation.* Forty postcodes with the highest ACE participation are shown in Table 2. ACE participation is concentrated in the band of south-eastern postcodes running out to Selby, Wattle Glen and Kangaroo Ground, the inner city areas (Carlton, Flemington, Fitzroy, Collingwood, South Yarra) and the bayside suburbs (St. Kilda, Elwood, Brighton, Hampton, Beaumaris, Sandringham). Figure 3 maps this ACE participation (ACE as a proportion of all ACE and TAFE) on to the distribution of the 'qualifications' indicator, suggesting quite a strong association of dominant ACE participation with higher socio-economic status in Melbourne's more affluent postcodes. The strength of ACE participation falls away with decreasing levels of education (as measured by proportion of populations holding a post-school qualification in 1996). Figure 2 shows that high TAFE participation is, by contrast with ACE, associated with low socio-economic status as indicated by the qualifications indicator (though there is not, with a few exceptions, much variation within most of the postcodes, since many, even most, of the postcodes are in the 6-9% range). The older inner city suburbs are interesting because of their mixed socio-economic character (older, less skilled and poorer residents together with younger, more educated and more affluent people associated with the gentrification of the inner city). Research needs to explore to what extent these different groups are represented in the ACE clienteles of high ACE participation postcodes.
3. *Low VET participation.* The forty postcodes with the lowest VET participation rates include clusters of postcodes in the northern suburbs (Greenvale 3059, Reservoir 3073, Noble Park 3074, Lalor 3075), the western suburbs (Glenroy 3046, Essendon 3033, Keilor Park 3042) and the north-western suburbs, that have somewhat higher rates (Knox City 3152, Bayswater 3153, Burwood East 3141). However, there are few postcodes with rates lower than 8% and overall many Melbourne postcodes have rates in the 8-10% range. Low ACE participation is contributing to lower VET participation rate in some of these areas. While lower socio-economic levels (lower household incomes and qualification levels) are typically associated with lower participation, particularly in ACE, it is also the case that the most advantaged areas of Melbourne have low overall VET rates (Toorak 3142, Caulfield 3161, Balwyn 3104, Brighton East 3187).

**Figure 1. Combined TAFE & ACE participation, Melbourne postcodes, 1996**

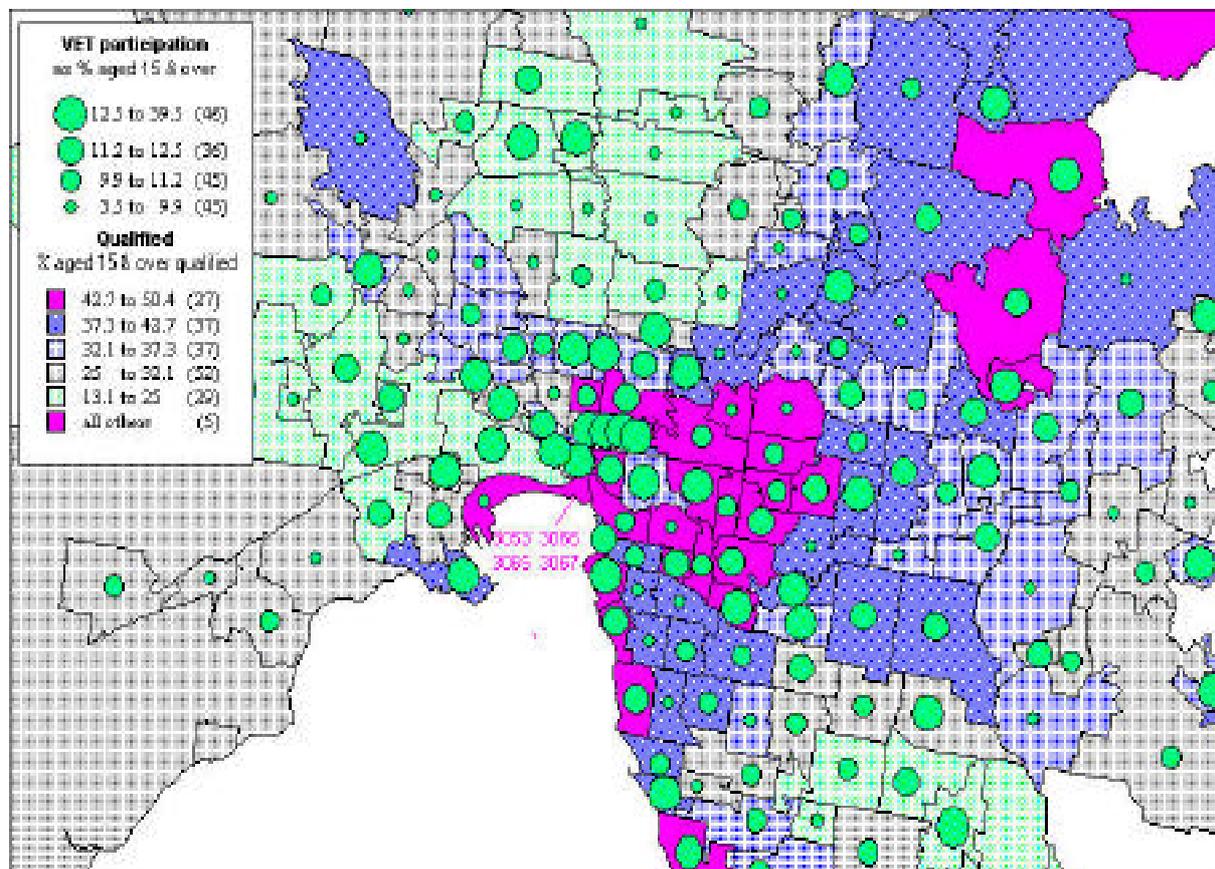


Figure 2. TAFE participation, Melbourne postcodes, 1996

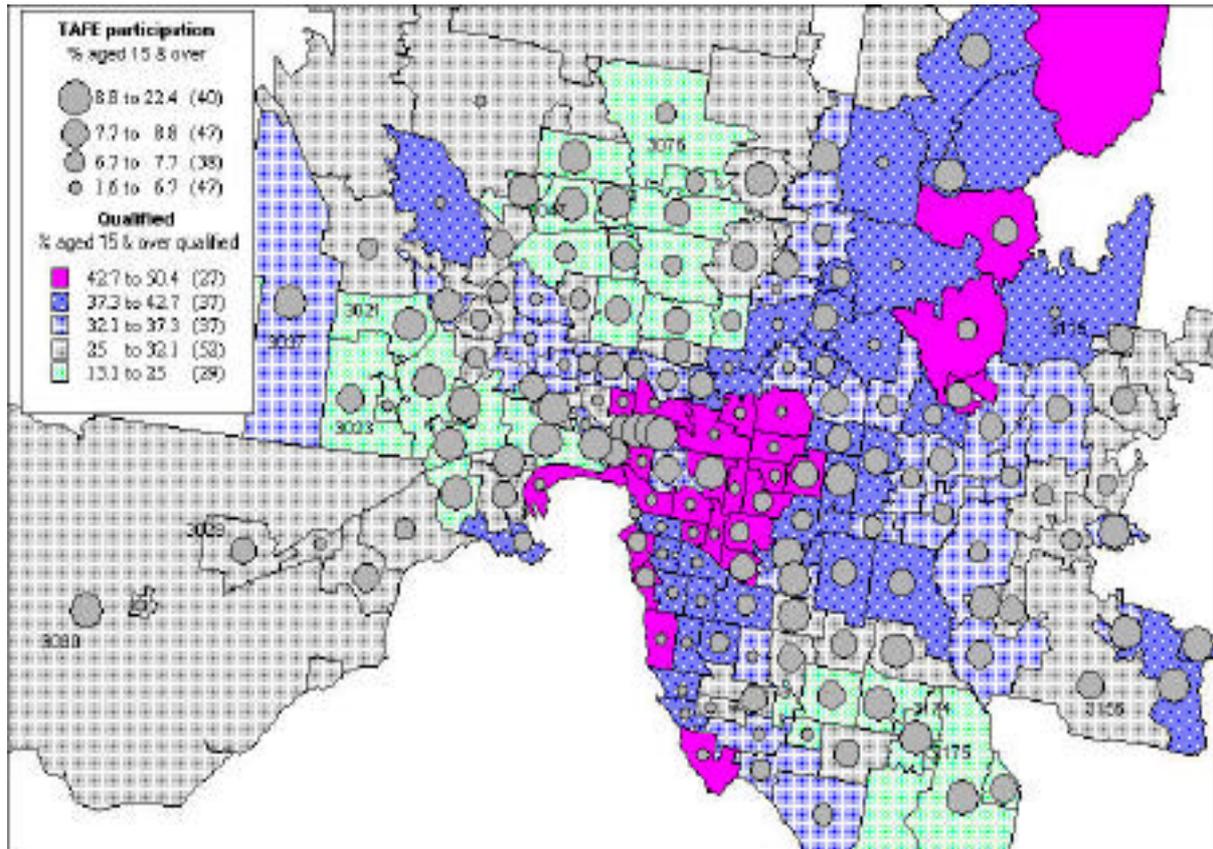
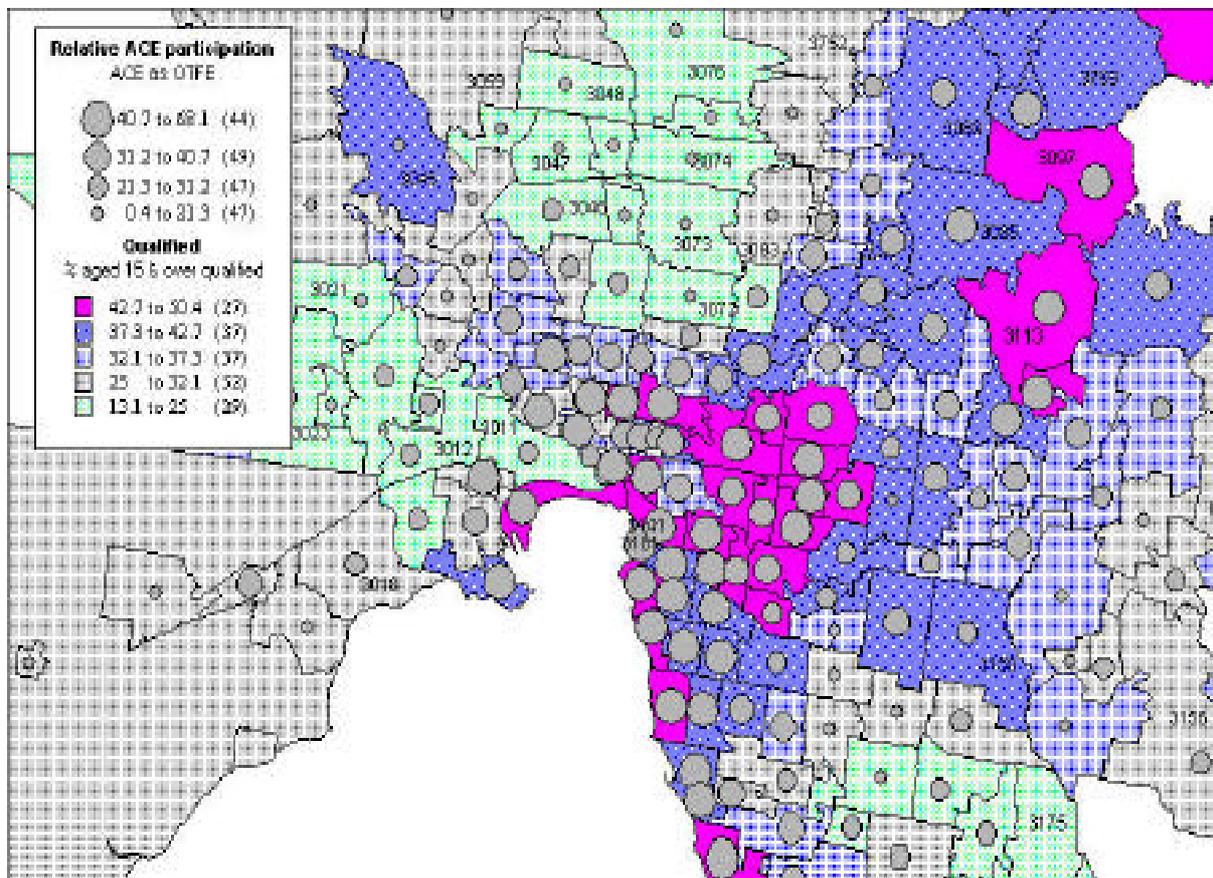


Figure 3. Relative ACE participation, Melbourne postcodes, 1996



## Conclusion

The Melbourne postcode analysis confirms the broad trend noted in the Sydney studies for TAFE and ACE participation to be differentiated by the socio-economic status of the postcode. However, the Melbourne participation maps show a good deal of variability in this broad relationship that needs to be explained. There are also considerable local variations in participation across adjacent postcodes. The general trend is for relatively high rates of participation with TAFE and ACE reaching most areas, yet differentiated to a degree by socio-economic influences. This complexity is consistent with the marked diversification of VET in Melbourne and a corresponding differentiation of clienteles and services in TAFE and ACE. The VET picture is, of course, incomplete without the mapping of participation in private providers. The implications of this for equity need to be further examined.

A number of issues with implications for equity policy need to be explored through further analysis of the Melbourne postcode data.

1. *Regional disadvantage effects.* Research needs to examine more critically the concept of 'disadvantage' that underlies and is not adequately expressed in current notions of 'equity groups'. Here the postcode studies need to examine urban regional patterns of participation more closely, in their relationship to socio-economic factors. The relative strength of TAFE in outer western suburbs, and the south-eastern region, as well as the complexities of ACE found in inner Melbourne need to be examined in more detail in relation to questions of the kind and level of advantage or disadvantage that might be influencing the nature of the TAFE and ACE clienteles which are represented by postcode participation patterns. This more detailed analysis should employ a range of indicators of socio-economic status, such as the SEIFA Indexes (ABS 1999b) which distinguish measures of disadvantage, including economic measures (related to household income and housing) from educational-occupational measures. What the postcode studies demonstrate is that the regional distribution of disadvantage is a salient factor in VET participation that cannot be ignored by national or state policy interested in equity issues.
2. *Provider clienteles and equity.* Further work needs to explore ACE and TAFE participation in those postcodes that have a mix of socio-economic advantage and disadvantage. How is this variability reflected in their VET participation? The central Melbourne postcodes are interesting in regard to the role of ACE in reaching local disadvantaged clienteles as opposed to relatively advantaged ACE participants in the same area. Here the SEIFA indices can be useful in indicating to what extent these postcodes have a 'social mix' that is being addressed by providers who are aware of their locality and its social diversity and differentiate their provision to meet a range of educational needs. What ACE organisations are developing equity strategies that reach such clienteles? Here, there is a possibility of linking participation research to a wealth of studies of good practice in adult community education that make strong claims about the equity role of neighbourhood houses and other ACE organisations (see ACFEB 1998, Bradshaw 1995, Falk et al forthcoming). Equally, it is possible to explore the extent to which TAFE provision is similarly localised and differentiated in terms of its 'equity clienteles'. No assumptions are made about how complementary such provision might be, and this needs to be analysed.
3. *VET clienteles and outcomes.* Further work needs to inquire further into the differentiation of TAFE and ACE provision across groups of postcodes in regions of Melbourne. If TAFE is most dominant in outer-western or southeastern suburbs, who are the clienteles served (in terms of their employment and schooling levels and cultural background) and more significant, what is the nature of participation in terms of the kinds and levels of courses taken? Though AVETMISS data has its limitations, it is still possible to measure the extent to which participation occurs in Stream 2000 area in TAFE, or ACE (reflecting literacy provisions) or initial vocational training (Stream 3000). This can be taken further by computing outcome measures such as module completion rates by postcode to give a picture of achievement across areas differing in socio-economic makeup. Thus the question is not simply whether disadvantaged individuals are represented in ACE or TAFE, though we do want to know what extent clients have 'markers' of disadvantage such as low schooling or poor employment, particularly if they are from the 'equity groups' nominated by national policy. What it is important to know is the extent to which TAFE or ACE is directing

resources to these clienteles and assisting them to achieve the benefits of participation. As this article and others have argued, this is primarily a matter of effective local strategies, including employment-based strategies developed 'on the ground'.

The postcode participation analysis of Melbourne illustrates the tantalising nature of broad-brush studies. They invite generalisations about the social distribution of VET participation and achievement, but demand further analysis of the educational role of TAFE and ACE in these localities in order to understand how certain equity outcomes can result from the interactions of provider factors, client groups and policy and resourcing constraints.

Note:

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## References

ABS 1998a *Cdata96 with MapInfo 4.0*, 1996 Census of Population and Housing, Australia 1996, Final release. CD-ROM. Canberra, Australian Bureau of Statistics.

ABS 1998b *Socio-economic indexes for areas (SEIFA)*. Information paper, 1996 Census of Population and Housing, Cat No 2039, Canberra, Australian Bureau of Statistics.

ACFEB 1998 *Transforming lives, transforming communities*. Conceptual framework for further education curriculum. Melbourne: Adult and Community and Further Education Board. 2nd ed

Bradshaw, D 1995 *Multiple images, common threads*. Melbourne: Adult Community and Further Education Board.

Falk, I, et al forthcoming ACE Portraits. Research commissioned by the Adult Community and Further Education Board. Melbourne, ACFEB.

Golding, B and Volkoff, V 1997 Participation in VET in Australia: Same drives, different needs?' In Ferrier F. and Anderson D. eds, *Different drums, one beat: Economic and social goals in education and training*. Adelaide: National Centre for Vocational Education Research.

McIntyre & Volkoff in progress. Beyond participation: Client group, regional influences and provider strategies in equity outcomes. Project funded by the National Research and Evaluation Council NREC.

McIntyre J, Brown A & Ferrier F 1996 *The economics of ACE delivery*. Research report commissioned by the NSW Board of Adult and Community Education. Sydney, NSW Board of Adult and Community Education.

McIntyre, J 1998 Policy symbolism and economic realities: ACE, equity and the market. In Ferrier F. and Anderson D. eds, *Different Drums, One Beat: Economic and Social Goals in Education and Training*. Adelaide, National Centre for Vocational Education Research.

McIntyre, J 1999 Local equity analysis: findings of a Sydney TAFE postcode participation study. In *Quality and Diversity in VET Research*, Proceedings of the second annual conference of the Australian Vocational Education and Training Research Association. Alexandria, Sydney, The Association.

McIntyre, J 2000 Equity and local participation in VET: policy critique and research directions. *ANZ Journal of Vocational Education Research*, 8 1, June.

McIntyre, J and Kimberley H 1997 Planning pathways for women from ACE to VET. Research report for the MCEETYA Womens VET Taskforce. Fremantle: WA Department of Training

NCVER 1999 Distances travelled from home to TAFE. Adelaide: NCVER.

SSCEET (1998). R Crowley, (Chair). Beyond Cinderella. Second report of the Senate standing committee on employment, education and training. Canberra: Australian Government Publishing Service.

Volkoff, V and Golding, B 1998 Drowning not waving: equity target groups in the marketplace, in McIntyre, J and Barrett, M. eds *VET research: Influencing policy and practice*, Proceedings of the Annual Conference of the Australian Vocational Education and Training Association. Sydney: AVETRA.

Table 1 Melbourne postcodes, high VET participation rates

Post code	TAFE n	ACE n	VET PR	TAFE PR	ACE PR	Qual %	HHI 16K	ACE: TAFE	
3159	Selby	170	187	39.5	18.8	20.7	50.2	10.0	1.10
3047	Broadmeadows	3097	336	24.8	22.3	2.4	28.0	22.7	0.11
3096	Wattle Glen	83	69	23.2	12.7	10.5	47.8	6.8	0.83
3128	Box Hill	2032	448	20.6	16.8	3.7	49.9	21.0	0.22
3114	Park orchards	190	288	20.4	8.1	12.3	51.2	5.9	1.52
3000	Melbourne	655	690	17.9	8.7	9.2	47.6	18.7	1.05
3097	Kangaroo Grnd	66	75	17.9	8.4	9.5	57.1	7.4	1.14
3099	Nutfield	295	209	17.6	10.3	7.3	50.5	10.3	0.71
3158	Upwey	464	273	16.9	10.7	6.3	44.8	13.7	0.59
3160	Belgrave	677	478	16.9	9.9	7.0	47.6	11.8	0.71
3031	Flemington	1104	882	16.8	9.4	7.5	41.3	28.6	0.80
3067	Abbotsford	309	199	16.2	9.9	6.4	49.1	19.2	0.64
3066	Collingwood	506	164	15.9	12.0	3.9	43.7	31.9	0.32
3174	Noble park	3030	895	15.9	12.2	3.6	35.4	20.8	0.30
3003	West Melbourne	159	70	15.8	11.0	4.8	58.0	18.2	0.44
3154	The basin	292	152	15.4	10.1	5.3	44.0	9.4	0.52
3122	Hawthorn	1664	857	15.3	10.1	5.2	57.0	17.6	0.52
3013	Yarraville	833	594	15.2	8.9	6.3	40.3	22.8	0.71
3011	Footscray	1603	660	14.8	10.5	4.3	39.6	27.9	0.41
3065	Fitzroy	701	439	14.6	9.0	5.6	52.0	22.3	0.63
3012	West Footscray	1695	657	14.1	10.2	3.9	35.9	28.1	0.39
3061	Campbellfield	496	83	13.9	11.9	2.0	28.0	18.6	0.17
3175	Dandenong	3968	920	13.5	11.0	2.5	37.2	21.4	0.23
3056	Brunswick	1414	858	13.5	8.4	5.1	43.8	22.1	0.61
3093	Lower plenty	207	114	13.5	8.7	4.8	48.8	8.8	0.55
3032	Maribyrnong	1069	579	13.4	8.7	4.7	44.4	24.2	0.54
3121	Richmond	1645	1062	13.4	8.1	5.3	46.5	21.4	0.65
3182	St Kilda	1225	957	13.3	7.5	5.8	56.6	24.7	0.78
3147	Ashwood	883	329	13.3	9.7	3.6	48.0	21.1	0.37
3016	Williamstown	654	632	13.3	6.8	6.5	50.6	21.2	0.97
3191	Sandringham	311	506	13.3	5.1	8.2	51.5	17.4	1.63
3116	Chirnside park	402	227	13.1	8.4	4.7	39.7	10.7	0.56
3196	Bonbeach	1233	615	13.0	8.7	4.3	39.6	23.7	0.50
3139	Wandin	810	387	13.0	8.8	4.2	38.4	13.9	0.48
3053	Carlton	604	362	13.0	8.1	4.9	45.5	30.2	0.60
3132	Mitcham	869	574	12.9	7.8	5.1	45.0	16.6	0.66
3170	Mulgrave	1858	661	12.9	9.5	3.4	41.8	11.7	0.36
3173	Keysborough	1336	440	12.8	9.6	3.2	32.4	14.7	0.33
3036	Keilor	366	111	12.7	9.8	3.0	43.7	9.0	0.30

Table 2 Melbourne postcodes, high ACE participation rates

Postcode	TAFE n	ACE n	VET PR	TAFE PR	ACE PR	QUAL	HHI 16K	ACE: TAFE	
3159	Selby	170	187	39.5	18.8	20.7	50.2	10.0	1.10
3114	Park orchards	190	288	20.4	8.1	12.3	51.2	5.9	1.52
3096	Wattle glen	83	69	23.2	12.7	10.5	47.8	6.8	0.83
3097	Kangaroo grd	66	75	17.9	8.4	9.5	57.1	7.4	1.14
3000	Melbourne	655	690	17.9	8.7	9.2	47.6	18.7	1.05
3191	Sandringham	311	506	13.3	5.1	8.2	51.5	17.4	1.63
3031	Flemington	1104	882	16.8	9.4	7.5	41.3	28.6	0.80
3099	Nutfield	295	209	17.6	10.3	7.3	50.5	10.3	0.71
3002	East Melbourne	215	312	11.8	4.8	7.0	60.4	12.1	1.45
3160	Belgrave	677	478	16.9	9.9	7.0	47.6	11.8	0.71
3054	Carlton north	343	494	11.1	4.6	6.6	57.0	16.5	1.44
3016	Williamstown	654	632	13.3	6.8	6.5	50.6	21.2	0.97
3193	Beaumaris	617	814	11.4	4.9	6.5	52.2	13.3	1.32
3186	Brighton	669	796	11.9	5.4	6.5	55.0	12.5	1.19
3067	Abbotsford	309	199	16.2	9.9	6.4	49.1	19.2	0.64
3013	Yarraville	833	594	15.2	8.9	6.3	40.3	22.8	0.71
3158	Upwey	464	273	16.9	10.7	6.3	44.8	13.7	0.59
3068	Fitzroy north	827	824	12.2	6.1	6.1	56.7	19.0	1.00
3039	Moonee ponds	603	564	12.3	6.3	5.9	44.7	21.1	0.94
3182	St Kilda	1225	957	13.3	7.5	5.8	56.6	24.7	0.78
3004	St Kilda road	159	143	12.0	6.3	5.7	53.4	12.8	0.90
3126	Canterbury	329	345	11.1	5.4	5.7	57.7	12.6	1.05
3184	Elwood	846	717	12.4	6.7	5.7	59.4	18.8	0.85
3065	Fitzroy	701	439	14.6	9.0	5.6	52.0	22.3	0.63
3141	South yarra	882	882	11.1	5.6	5.6	56.8	17.1	1.00
3111	Donvale	512	412	12.4	6.9	5.5	48.0	10.3	0.80
3143	Armadale	435	373	11.7	6.3	5.4	56.1	17.0	0.86
3051	Nth Melbourne	489	413	11.7	6.3	5.3	48.6	29.3	0.84
3188	Hampton	425	457	10.2	4.9	5.3	50.5	16.6	1.08
3154	The basin	292	152	15.4	10.1	5.3	44.0	9.4	0.52
3121	Richmond	1645	1062	13.4	8.1	5.3	46.5	21.4	0.65
3113	Warrandyte	420	316	12.2	7.0	5.2	53.9	7.6	0.75
3124	Camberwell	859	630	12.3	7.1	5.2	57.1	13.2	0.73
3122	Hawthorn	1664	857	15.3	10.1	5.2	57.0	17.6	0.52
3132	Mitcham	869	574	12.9	7.8	5.1	45.0	16.6	0.66
3057	Brunswick east	427	293	12.6	7.5	5.1	44.3	22.6	0.69
3056	Brunswick	1414	858	13.5	8.4	5.1	43.8	22.1	0.61
3053	Carlton	604	362	13.0	8.1	4.9	45.5	30.2	0.60
3095	Eltham	1354	986	11.5	6.7	4.8	50.6	7.8	0.73

Table 3. Melbourne postcodes, low VET participation rates

Postcode	TAFE n	ACE n	VET PR	TAFE PR	ACE PR	QUAL	HHI 16K	ACE: TAFE	
3006	Southbank	37	43	3.5	1.6	1.9	59.9	9.4	1.16
3027	Laverton north	27	13	3.5	2.4	1.1	77.6	0.0	0.48
3024	Wyndham vale	142	1	3.6	3.6	0.0	34.9	7.9	0.01
3202	Heatherton	55	15	4.4	3.5	1.0	0.0	17.1	0.27
3052	Parkville	219	162	6.5	3.7	2.7	48.9	19.0	0.74
3022	Ardeer	371	73	6.6	5.5	1.1	27.6	20.9	0.20
3045	Tullamarine	17	3	7.0	6.0	1.1	48.1	22.4	0.18
3115	Wonga park	135	76	7.3	4.7	2.6	48.2	7.3	0.56
3059	Greenvale	393	55	7.5	6.5	0.9	39.5	6.4	0.14
3161	Caulfield north	480	383	7.7	4.3	3.4	55.7	16.1	0.80
3076	Epping	945	102	8.0	7.3	0.8	32.3	8.6	0.11
3073	Reservoir	2544	445	8.1	6.9	1.2	32.9	25.0	0.17
3038	Keilor downs	1647	340	8.3	6.9	1.4	37.8	7.5	0.21
3142	Toorak	421	510	8.6	3.9	4.7	57.6	11.3	1.21
3075	Lalor	1332	181	8.7	7.6	1.0	27.9	16.1	0.14
3034	Avondale Hts	719	169	8.8	7.1	1.7	34.1	15.5	0.24
3046	Glenroy	1675	480	8.8	6.8	2.0	34.6	23.4	0.29
3105	Bulleen	560	267	9.0	6.1	2.9	42.1	16.0	0.48
3187	Brighton east	500	472	9.0	4.6	4.4	53.3	15.3	0.94
3042	Keilor park	790	190	9.1	7.3	1.8	36.6	19.0	0.24
3151	Burwood east	613	180	9.1	7.0	2.1	42.6	13.1	0.29
3104	Balwyn north	819	535	9.2	5.6	3.6	52.9	13.5	0.65
3033	Keilor east	851	194	9.3	7.6	1.7	38.5	11.5	0.23
3074	Thomastown	1536	196	9.4	8.3	1.1	28.6	16.0	0.13
3190	Highett	430	228	9.4	6.2	3.3	40.8	22.8	0.53
3041	Essendon north	537	228	9.4	6.6	2.8	45.6	16.5	0.42
3044	Pascoe vale	1169	412	9.4	7.0	2.5	39.4	21.2	0.35
3153	Bayswater	1199	312	9.5	7.5	2.0	39.3	15.1	0.26
3125	Burwood	1096	427	9.5	6.8	2.7	48.8	17.9	0.39
3079	Ivanhoe	649	454	9.5	5.6	3.9	53.5	16.8	0.70
3152	Knox city centre	1780	475	9.5	7.5	2.0	41.5	13.0	0.27
3085	Yallambie	606	290	9.5	6.4	3.1	44.6	14.5	0.48
3081	Heidelberg Nth	705	266	9.5	6.9	2.6	36.7	28.2	0.38
3084	Heidelberg	1021	636	9.5	5.9	3.7	52.2	14.5	0.62
3137	Kilsyth	689	226	9.5	7.2	2.4	38.4	13.8	0.33
3165	Bentleigh east	952	455	9.6	6.5	3.1	44.9	17.7	0.48
3185	Elsternwick	634	457	9.6	5.6	4.0	53.5	20.2	0.72
3183	Balaclava	800	603	9.7	5.5	4.2	54.6	20.9	0.75
3060	Fawkner	674	147	9.7	8.0	1.7	30.1	26.0	0.22

