The distribution of Victoria's sign language users:
Analysis from the 1996 and 2006 census

©2009
Prepared for Vicdeaf by Dr. Louisa Willoughby

Copyright © 2009 Louisa Willoughby and Vicdeaf (The Victorian Deaf Society)

The National Library of Australia Cataloguing-in-Publication entry

Author: Willoughby, Louisa.

Title: The distribution of Victoria's sign language users [electronic resource]: analysis from the 1996 and 2006 census / Louisa Willoughby.

ISBN: 9780949467102

Subjects: Deaf--Victoria--Statistics.
Australian Sign Language--Victoria--Statistics.
Victoria--Population--Statistics.

Other Authors/Contributors:
Victorian Deaf Society.

Dewey Number: 304.609944

This work is copyright. It may be reproduced in whole or part for studying or training purposes subject to the inclusion of an acknowledgement of the source and no commercial usage or sale. Reproduction for purposes other than those indicated above requires permission from the Victorian Deaf Society.

Table of contents

List of figures and tables

Introduction

This report outlines the geographic distribution of sign language users living in Victoria at the time of the 2006 census, and compares this distribution to reports from previous census. The report explores the distribution of both the country and metropolitan population and identifies a number of key trends in settlement patterns which have important consequences for service delivery.

A note on data and terms

Unless otherwise stated, all data in this report comes from the 1996, 2001 and 2006 Australian Census of Population and Housing (hereafter "the census"). Census data can be seen as the most authoritative data available on the composition of the signing population, because it surveys the entire Australian population rather than attempting to extrapolate trends from a small sample population. Despite this advantage, several caveats need to be borne in mind when interpreting the census data. Of these, perhaps the most important is that census questions about the language people use are in no ways crossed tabulated with data on disability. Thus there is no way of knowing the level of hearing loss (if any) of those who indicate they use a sign language on the census, although the phrasing of the question – "what language do you speak at home?" – does at least suggests that only people who use a sign language for a significant proportion of their household communication would list it on the census. This issue will be explored in more detail below, but for the moment the two important points to take away from this discussion are: 1. Sign language use should not be taken as an indication of deafness, though in many cases the two will go together 2. Hearing people who have learnt Auslan or another sign language solely through classroom interaction (e.g. those with no deaf family members) are not expected to count themselves as sign language users on the census.

For many ethnic groups the question of what to call the community's language, and indeed how much linguistic variation can be tolerated within the one language, is a moot point (c.f. Terborg and Ryan 2002, various papers in Freeland and Patrick 2004). Within the Australian Deaf community, there is strong consensus that Auslan is the preferred name for the Australian sign language variety, however, this name has only been widely used outside the Deaf community since the 1990s[1].

[1] Providing a date for when a term became widely used is a delicate business, however the inclusion of Auslan in the 1991 Australian Language and Literacy Policy is seen by many as a convenient starting date for wider knowledge and use of the term.

Thus older signers, or those who are unsure that their interlocutor will know what they mean by Auslan, may refer to their language as simply “sign language”, or they may use a third term altogether. These different naming practices raise the issue of whether responses of “Auslan” and “sign language” on the census should be viewed as indicating the one language form, or whether they are used to mean two different things. Throughout this report it is careful not interpret the total signing population as being equivalent to the total number of Auslan users, however from a linguistic perspective it seems safe to include people who call their language “sign language” in counts of Auslan users. Auslan is undoubtedly a ‘real’ language, with its own grammar and dictionary (Johnston 1989a, 1989b), never-the-less it is a language that has only been weakly codified and thus shows high levels of regional variation and individual idiosyncrasies. Under these circumstances, there seems little point in trying to draw a line between those signers who use ‘proper’ Auslan and those who use a more ad hoc or Auslan-influenced sign language; and even if we were to undertake such an endeavour, census data on language-naming practices should not be seen as accurately conveying this distinction. Clearly, informants who indicated that they use BSL, ASL or other national varieties should not be included in estimates of Auslan users, however as there were only six such respondents in Victoria they are of little consequence to this report.

With these points in mind, the report now turns to data analysis.

Community size – Victoria and Australia

The 2006 Australian census recorders 2,172 sign language users living in Victoria, and 7,150 for Australia as a whole. Among Victorians, Auslan is clearly the most widely attested sign language – with 1,907 users – follows by 206 who reported simply using 'sign language' (i.e. not further defined or N.F.D.), and 6 who reported using a sign language such as BSL or Malaysian sign language not elsewhere classified (N.E.C.) by the Australian Bureau of Statistics. Table 1 outlines changes in the size and composition of the Victorian signing community from 1996 to 2006:

	AUSLAN	SIGN LANGUAGE, N.F.D.	SIGN LANGUAGES, N.E.C.	TOTAL SIGNERS
1996	459 (48%)	439 (45%)	67 (7%)	989
2001	917 (71%)	276 (22%)	55 (4%)	1289
2006	1907 (90%)	206 (10%)	6 (0%)	2172

Table 1: Victorian Sign language users 1996-2006

Comparing the number of signers recorded in 2006 with those recorded in 2001 and 1996 uncovers several significant differences which cannot be accounted for by natural growth alone. As Table 1 shows, the total number of signers almost doubled between 2001 and 2006, while the percentage of all signers claiming to use Auslan almost doubled between 1996 and 2006. These increases are well above what could be expected from natural growth (especially since Johnston 2004 has hypothesised that the signing population in Australia is declining) and is likely caused by a number of interrelated factors. As Ozolins and Bridge (1999:8) note, underreporting of sign languages in the 1996 census was likely to have been common because of the phrasing of the question respondents were asked – "do you speak another language at home?". Since sign languages are not spoken per se, it is reasonable to presume that many signers would not have listed their language in response to this question. Similar issues arise with the specification "at home", because many Deaf people who still live with their parents may prefer to communicate in Auslan (or another sign language) but use English and lip reading to communicate with their hearing families. Kipp et al (1995:26) have noted that the 'at home' specification leads to speaker numbers being undercounted for most ethnic languages – as large numbers of community members use English at home but their ethnic language in a variety of other settings – however this problem is more acute for Deaf individuals because in over 90% of cases they are born into hearing families with no knowledge of Auslan.

In the years since 1996, Deaf organisations have undertaken an awareness campaign among their members to encourage them to list Auslan on the census and it is hypothesised that this is the major reason why there is such a sharp increase in the number of signers in the intervening period. These campaigns have likely also contributed to the dramatic rise in the number of Auslan users relative to other sign languages, however here increasing community pride and wider recognition of Auslan among the hearing population may also be a factor. It should also be noted that the increase in sign language users has not been uniform across the states – with Victoria now significantly over-represented in both the number of signers nationally and the proportion of signers listing Auslan as their sign language:

	SIGNERS 2001	SIGNERS 2006	% INCREASE 2001-06	% TOTAL SIGNERS USING AUSLAN (2006)
AUST	5503	7150	29.9	59.8%
ACT	97 (1.8%)	96 (1.3%)	-1.0	69.1%
NSW	1769 (32.1%)	1959 (27.4%)	10.7	59.6%
NT	57 (1.0%)	44 (0.6%)	-22.8	38.6%
QLD	1137 (20.7%)	1468 (20.5%)	29.1	44.0%
SA	450 (8.2%)	624 (8.7%)	38.7	61.6%
TAS	218 (4%)	194 (2.7%)	-11.0	58.3%
VIC	1295 (23.5%)	2172 (30.4%)	67.7	71.0%
WA	481 (8.7%)	590 (8.3%)	22.7	67.8%

Table 2: Australian sign language users 2001 and 2006

One possible explanation for the strong state-based differences seen above is that they are the result of different opportunities to learn sign languages in each state. However national reviews such as Johnston (2004) have not uncovered significant differences in this area nor do ad hoc data from educational institutions seen by the author record such a trend. From conversations within the Deaf community it seems a more plausible explanation is not that the number of signers per se has increased in dramatically in Victoria (and to a lesser extent also in South Australia and Queensland), but simply that Victorian deafness organisations had the greatest success with their public awareness campaigns to get Deaf people to list Auslan on the census. The signing population is highly dispersed with not all sign language users being active participants in a local Deaf community. When coupled with varying degrees of education and English literacy skills it is easy to see how it is a

complicated task to ensure that any public education campaigns reach the widest possible audience. Since at least some deafness organisations in Victoria are comparatively well-resourced when compared to other states – and the small size of the state makes distance and isolation less of an issue – it seems plausible that the campaign may have had more success here than in other states.

Given the potential for underreporting in census data, some speculation about the likely size of the Australian signing population is required. Working from a combination of census data, studies of deafness prevalence rates and a variety of historical records Johnston (2004:366) estimated that the Australian signing population stood at a minimum of 6,500 individuals in 2001. Broadly speaking, the census figures from 2006 would appear to corroborate this estimate; however several important caveats should be added to this estimate. Most importantly, Johnston's figures focus on Deaf people who are native Auslan signers, whereas census data may also include hearing family members and deaf people who were raised to communicate orally and only learnt Auslan as adults. Given these different definitions of who constitutes the signing population current census figures might suggest Johnston's figure is an overestimate. However, as was discussed above, the significant rise in the Victorian signing population between 2001 and 2006 suggests underreporting on the census has been an issue in the past and may still be an issue in other states that did not see a similar increase. Had the Victorian increased been replicated nationally, it would have resulted in a national signing population of 9,200 people. Of course, there is no way of knowing if this would be a better estimate of the true size of the Australian Deaf community, however given trends in census data, Johnston's estimates and anecdotal experience suggesting a number of Auslan users only learn the language as adults, it seem an stimate of around 8,000 sign language users might be a more accurate figure. Ultimately though, the numbers will always be elastic depending on how the population is defined and what use the figures are put to, since the number of people using a sign language in their homes or as their preferred language is not necessarily the same as the number of Auslan users or the number of people requiring interpreting services.

In concluding this section, it should be noted that the increasing number of sign language users in census data should not be seen as negating Johnston's hypothesis that the signing population is in decline overall. Most importantly, Johnston's focus was on Deaf sign language users, whereas there is no question on hearing loss on the census that could be used to exclude hearing family members who report that they sign. Given the international trend of families increasingly incorporating at least some sign language or sign supported speech into parent-child interactions (e.g. Gregory, Bishop and Sheldon 1995, Meadow-Orlans and Sass-Lehrer 2003) it is possible that that the number of Deaf signers is decreasing

at a time when the number of signing family members is increasing, leading to a net gain in the total number of sign language users. It may also be too that Johnston's argument that the number of fluent, native signers is decreasing is correct, but that the number of people with a hearing loss who are learning some Auslan is increasing causing a net gain in Auslan users but a decrease in average language skills.

Ultimately what is important for Deafness organisation to realise is that alongside recent increases in people claiming to use a sign language in national censuses, there is evidence that the Deaf population is both declining and aging. Since this has important implications for service demand and delivery, organisations would be well-placed to monitor the demographic of the signing population in future censuses (and in other population surveys) ensure that this information is fed back into the strategic planning and policy development level of the organisation.

Geographic distribution of Victoria's signing population

Of the 2,119 people who reported using a sign language at home in 2006, 1551, or 73.2% live in Metropolitan Melbourne. It might be thought that the increasing ease with which interpreters and others services can be accessed in metro areas would make sign language users more likely to live in Melbourne than members of the general population. Yet in fact the proportion of signers in Melbourne is only fractionally above figures for the general population (73.0%). Informal discussion with Vicdeaf case managers suggests many sign language users living in regional Victoria have been able to gain work as agricultural labourers and working in canneries, and these job opportunities (together with family support networks) may well act as a 'pull factor' encouraging deaf people to remain in regional areas despite problems of isolation and lack of access to services. As will shall see, the signing population in regional areas is also concentrated in certain regional centres, with Geelong, Bendigo, Ballarat and Shepparton home to sizeable signing communities (40+ signers).

The metropolitan population

Within Melbourne, the signing population is concentrated in an arc through the middle and outer Eastern and South-Eastern suburbs. Sign language users are conspicuously absent from inner suburbs – from Brinkbank to Boroondara, Hobson's Bay to Bayside each municipality has less than 50 signers, which equates to less than 3.5 people for every 10,000 head of their total population. Figure 1 provides a visual representation of the distribution of Melbourne's signing population, while the full figures for each municipality are given in Appendix 1:

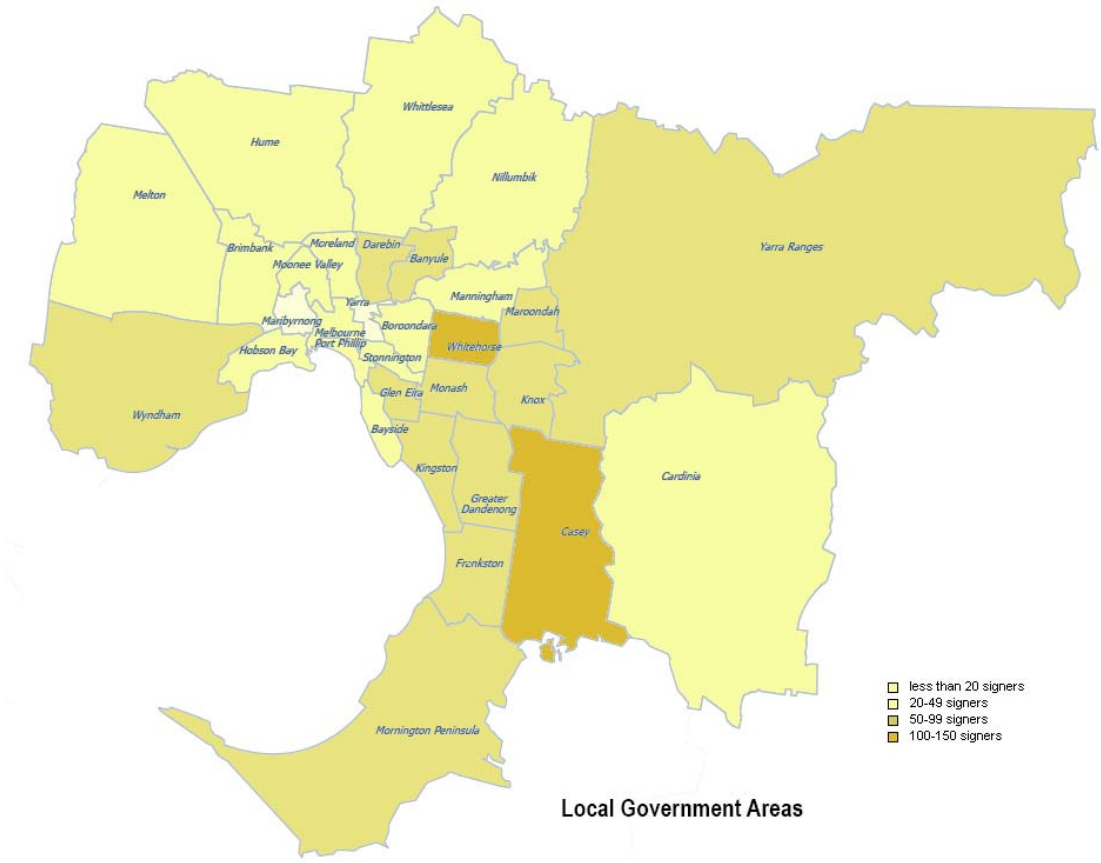


Figure 1: Melbourne's signing population by LGA

In terms of raw numbers, Casey (144 signers), Whitehorse (111) Monash (97) Frankston (94) and Banyule (83) have largest signing populations, however these figures need to be taken in context of the total size of the municipality. Measuring sign language users in terms of their concentration per 10,000 head of general population shows that the municipalities with the highest concentrations remain Frankston (8.1 in 10,000), Whitehorse (7.8 in 10,000) and Banyule (7.3 in 10,000) and Casey (6.7 in 10,000), with the addition of Maroondah to the top 5, with 7.1 signers per 10,000 residents

Several factors appear to be at work in shaping the distribution of Melbourne's signing population. There is a clear trend that many of the metropolitan municipalities with the lowest percentages of sign languages users are among Melbourne's most expensive suburbs to rent or buy a home. Thus is seems reasonable to argue that Deaf people are in the main priced out of municipalities such as Melbourne, Yarra and Port Philip, preferring instead to settle in more affordable areas such as Frankston and Casey. Not all affordable suburbs seem to be attracting signing residents in equal numbers however, as has been shown the signing population shows a marked preference for the South-Eastern growth

corridor over new estates in the Hume and Melton corridors. This may be in part because historically a number of deafness services have been (and in many cases still are) located in the Eastern suburbs, but may also be a response to better infrastructure and local job opportunities more generally on this side of Melbourne. The particularly high figures for the City of Whitehorse are also a result of Victoria's sole dedicated nursing home for Auslan users being located in the municipality – at the time of the census the home cared for approximately 30 residents.

Given that 20% of Melbourne's signing population now live in the four municipalities of Greater Dandenong, Casey, Frankston and Cardinia (and that public transport options remain limited in these outer suburbs) there may be an argument for some deafness organisations to open branches or provide dedicated case managers in this general area. Certainly growth in this area should be watched carefully in future and advocacy organisations would be well advised to establish a strong presence in the area to ensure that the development of schools, health, welfare and recreation services in this rapidly expanding regions take into account the needs of Deaf and hard of hearing residents.

The regional population

Within regional Victoria, the signing population is largely concentrated in a handful of municipalities. Of 50 LGAs, 13 have no signing residents at all, while only 17 have 10 or more sign language users. As might be expected, Victoria's two largest regional municipalities – Greater Geelong and Greater Bendigo – also lead regional areas in the number of signers (95 and 69 respectively) while the number 3 and 4 spots for sign language users are taken by the fifth and third largest regional LGAs – Shepparton (43 signers) and Ballarat (40 signers). Figure 2 outlines the distribution of Victoria's regional signing population, while the full figures for each municipality are given in Appendix 2:

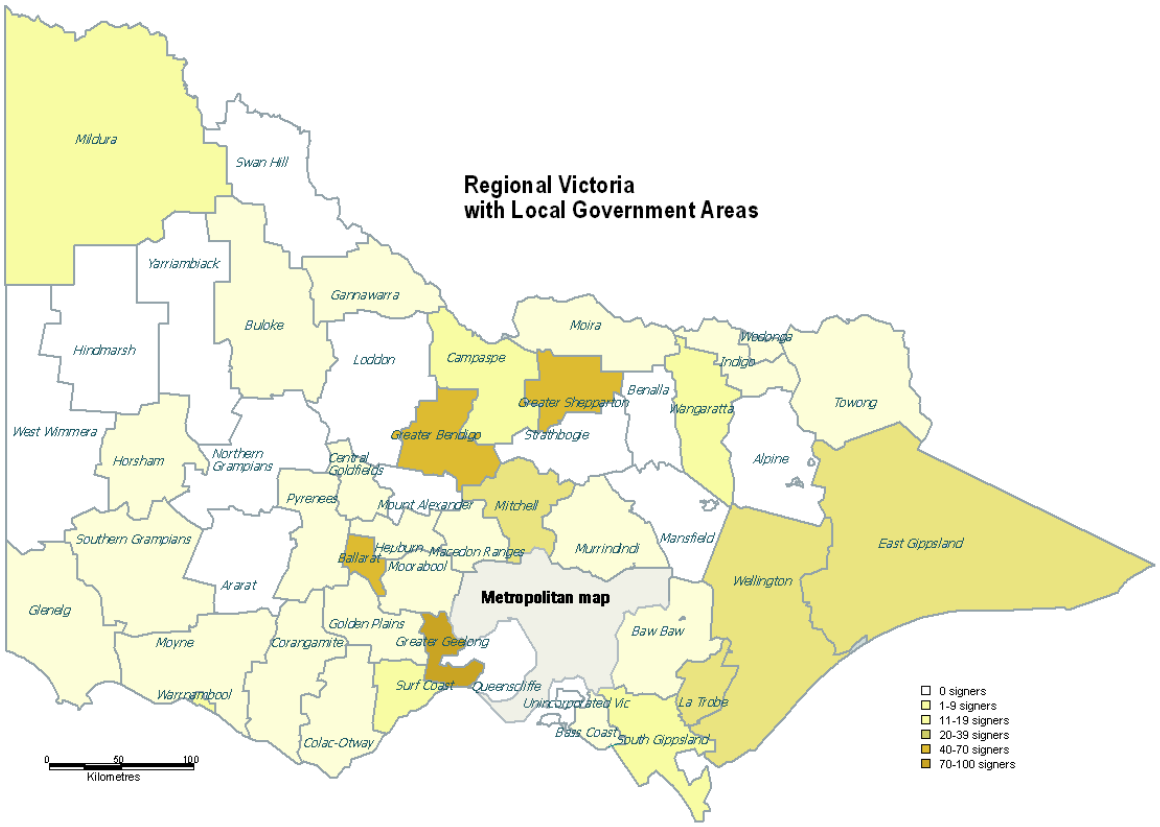


Figure 2: Regional Victoria's signing population by LGA

Aside from the municipalities with a high number of signing residents, mention should be made of several regional municipalities where the proportion of signers in the general population is unexpectedly high. In Surf Coast there are 9.1 sign language users for every 10,000 residents, while in East Gippsland the figure is 8.6 per 10,000. Greater Bendigo (7.5 per 10,000) and Mitchell (6.5 per 10,000) also report a high concentration of sign language users[2]. No reason for these increased rates is readily apparent, although Surf Coasts and Mitchell are adjacent to Greater Geelong and Greater Bendigo, so presumably the services and friendship of those major regional Deaf communities would at least be relatively accessible to signing residents of these shires.

While the signing population of country Victoria tends to cluster in major regional centres, the Gippsland area proves an exception to this rule and creates a unique challenge for service delivery. Of the 104 signers living in the DHS Gippsland region, 34 live in East Gippsland (itself Victoria's second largest shire by area), 25

[2] The highest proportion for the state (10.2 signers per 10,000 people) is actually found in the Borough of Queenscliffe, however since the Borough has only 3 signing residents this figure says more about the small population of the Borough than it does about meaningful demographic trends.

each live in Wellington and Latrobe and a further 10 live in South Gippsland (with sundry signers in Baw Baw and Bass Coast). This highly dispersed population creates difficulties when attempting to provide accessible deafness services, with distance often making it impractical (or at least incredibly costly) to arrange Auslan interpreters. The foundation of the Gippsland interpreter service has gone some way to alleviating these problems in recent years, however unmet demand and the tyranny of distance remains a real issue in this area. For all these reasons, Gippsland is an ideal area for organisations such as Vicdeaf to pilot initiatives aimed at improving service delivery for clients in regional areas.

Change from 1996 and 2001

In 2006 2,119 Victorians indicated that they used a sign language at home on the census form, up from 1,248 in 2001 and 965 in 1996. This exceptional growth rate (120%) is taken to be the result of higher levels of reporting, rather than a natural increase in the population (which Johnston 2004 has in fact argued is in decline). The increase has been particularly marked in regional areas, with the 197 signers recorded in 1996 morphing into 555 in 2006 (182% growth). The increasing number of sign language users living in regional areas poses a particular challenge for Auslan interpreting and equitable service delivery and strengthens the case for more sustained investment in service innovations in regional areas.

Number of signers in each LGA

Eight municipalities saw there number of signers increase by more than 50 people between 1996 and 2006. Of these, only the city of Greater Geelong is located outside the Melbourne metro area. In regional areas, growth in Greater Bendigo (48), Greater Shepparton (36) East Gippsland (31) is also worthy of comment.

LGA	INCREASE IN SIGNERS 1996- 2006
Casey (C)	93
Greater Geelong (C)	63
Frankston (C)	54
Wyndham (C)	52
Banyule (C)	52
Monash (C)	52
Maroondah (C)	51

Table 3: Top LGAs for increase in signers – 1996-2006

Those LGA where the signing population has increased most dramatically can generally be described as outer suburbs (here Monash is an exception), where

growth rates are typically high and housing more affordable than in more sought-after inner-city area. As with other service providers, deafness service providers need to be mindful of current trends of disadvantaged groups settling in outer suburban areas and in time may need to rethink their own location in order to remain easily accessible to their clients.

In addition to the 8 LGAs growing by more than 50 signers, a further 28 increased their population by between 10 and 48 people. Numbers were relatively stable (+/-10 people) in 44 municipalities, while the city of Yarra was the only LGA to report a marked decline in its signing population, down 20 people on 1996 numbers.

Increases in the signing population need to be seen in the light of over-arching trends in population growth. Between 1996 and 2006 Victoria's total population increased by 11%, however this growth was spread quite unevenly across municipalities. The most dramatic population increases were seen in Melton (100%) and the City of Melbourne (75%) with Wyndham, Casey also growing around 50%. Taking these growth rates into account, the increases in the signing population in Wyndham and Casey are slightly less dramatic, yet it should be noted that each still has 40-60 more signing residents than can be accounted for by natural growth alone. Interestingly, Melton seems relatively unpopular with signers – while the suburb's growth means the raw number of signers has increased, the proportion of signers has actually decreased (8 fewer signing residents than one would predict off 1996 figures). The only areas of the state to experience marked decline in their general population (greater than 10%) were municipalities the Mallee and extreme North-East, however these municipalities were home to less than 15 signers in total in 2006 so are of little relevance to us here.

Since only a small number of signers live in country areas, large increases in the raw number of sign languages users living in each regional municipality are not to be expected. While starting from a very low base, the number of signers in regional areas has increased significantly since 1996. Back then only 6 regional municipalities had more than 10 signing residents[3], and 25 had none at all[4], as compared to 17 and 13 respectively in 2006. Despite growth in the number of country municipalities with signing residents, increases in the regional signing population remained concentrated in a handful of key municipalities. Just 5 LGAs – Ballarat, Bendigo East Gippsland, Geelong and Shepparton – account for over 50% of the growth in country areas, while at the other end of the spectrum the signing population either remained stable or decreased in 12 municipalities. Strikingly 4 of

[3] These were Greater Geelong (32), Greater Bendigo (21), Ballarat (20), Wellington (16) and Mitchell (15).

[4] It should be noted that between 1996 the number of country municipalities increased by one as the old shire of Delatite was sub-divided into the shires of Mansfield and Benalla, none of which had a signing population in the years under study.

the 5 fastest-growing LGAs for sign languages users are major regional cities, suggesting that the country signing population has a strong preference for living in major centres than in more isolated rural areas.

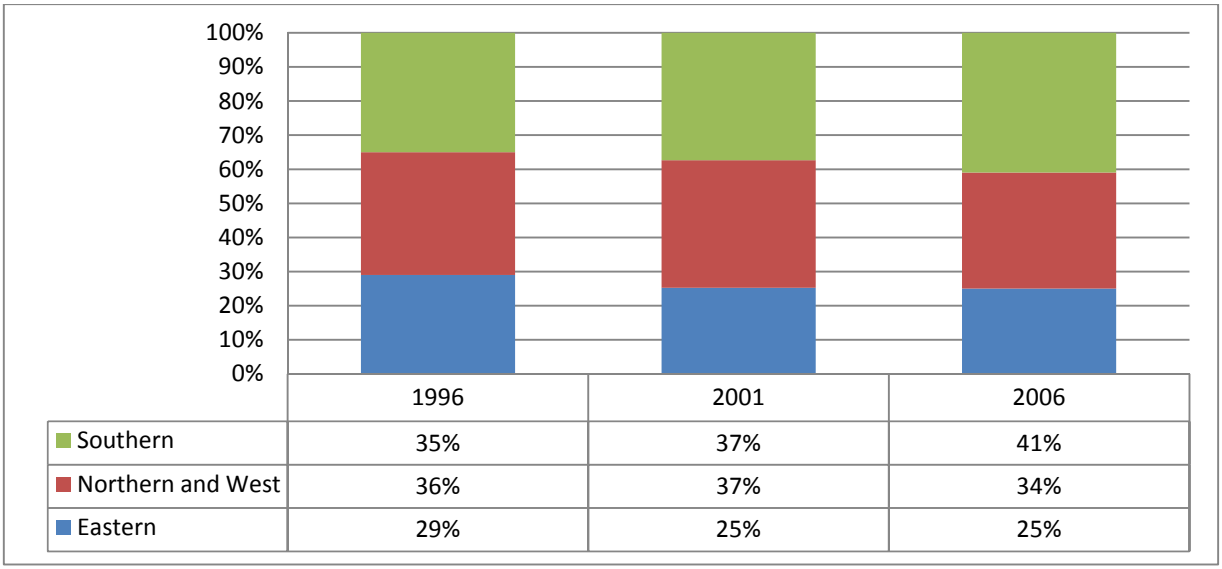
Change by DHS region

In addition to charting changes at the municipal level, a number of noteworthy changes can be identified by comparing data on the proportion of signers living in each DHS region. Between 1996 and 2006, the proportion of signers living in the Melbourne metro area has decreased from 76% to 73%, with the majority of the country increase occurring in regional centres such as Geelong and Bendigo. Table 2 provides an overview of these changes across the state as a whole, which will then be discussed in more detail for both metro and country areas.

PROPORTION LIVING IN EACH REGION			
	1996	*2001*	*2006*
Metro total	76%	75%	73%
Eastern	22%	19%	18%
Northern and West	27%	28%	25%
Southern	26%	28%	30%
Country total	24%	25%	27%
Barwon-South Western	6%	5%	8%
Gippsland	4%	4%	5%
Grampians	4%	3%	3%
Hume	4%	7%	5%
Loddon-Mallee	6%	6%	5%

Table 4: Distribution of total Victorian signing population by region – 1996-2006

Looking in more detail at the three Melbourne regions, table 2 shows that in 1996 the metropolitan signing population was relatively evenly spread across the three DHS regions. By 2006 however the differences between regions had become quite pronounced, with 41% of Melbourne's signers living in the Southern region and only 25% in the East.



	1996	2001	2006
Southern	35%	37%	41%
Northern and West	36%	37%	34%
Eastern	29%	25%	25%

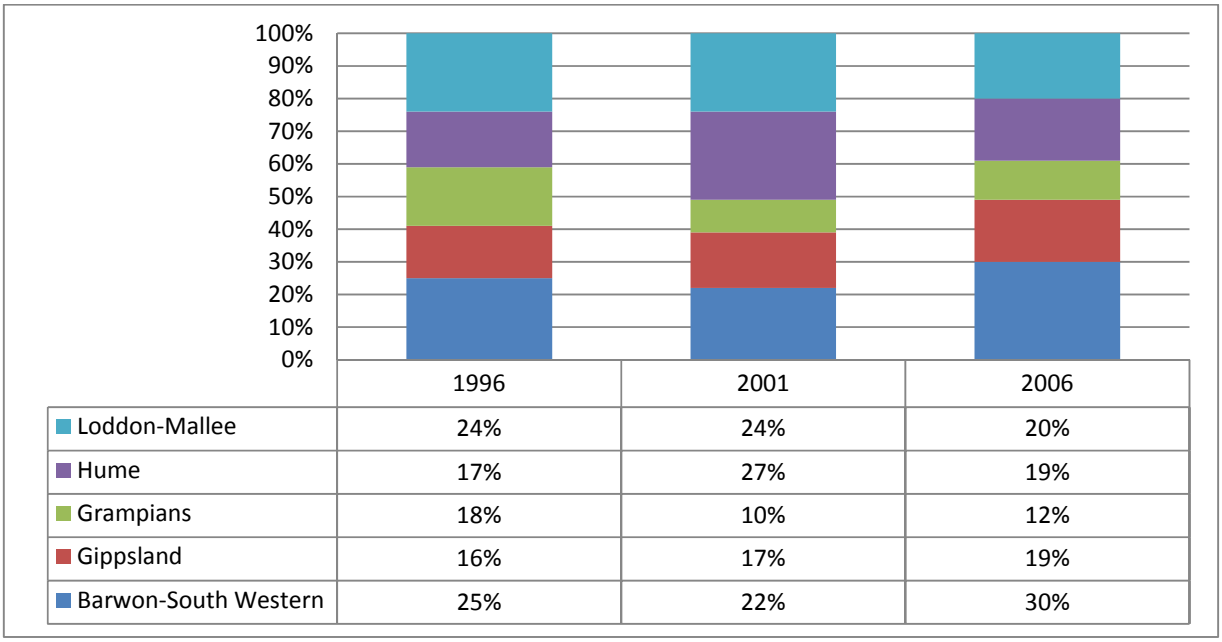
Figure 3: Distribution of metro signing population by region – 1996-2006

As with the LGA data presented above this distribution reflects general demographic trends in Melbourne, with population influx to the South-East corridor and to a lesser extent the Hume and Melton corridors and little new development in the East. However, if it remains a long-term trend it could become a dilemma for deafness services which have historically concentrated in the inner city and Eastern suburbs. While figures on the signing population are a poor indicator of the number of deaf children, there is a worrying lack of services in these growing areas relative to recent population increases. Within the Department of Education Southern Region[5] the only schools with deaf facilities are located on the Mornington Peninsula (Primary in Pearcedale and Secondary in Somerville), requiring students from the more populous areas of Dandenong, Clayton or Pakenham to commute for up to an hour each way to reach these somewhat isolated facilities. Added to the lack of accessible deaf facilities in the region, parents of deaf children living in the Southern region are not eligible to access the DHS parent advisor system, under the logic that they are geographic well-placed to access Aurora and Taralye services in Blackburn. While this may be true of parents from more inner south-eastern suburbs, it is certainly not the case for those living in Pakenham or Cranbourne and is an issue worthy of further attention and lobbying.

While all country regions saw a net increase in their signing population, the proportion of signers living in each region saw clear redistribution between 1996 and 2006. In 2006 Barwon and Loddon-Mallee both had around 25% of the country signing population, while the remaining regions were each home to around 17% of country signers.. By 2006 Barwon-South Western was a clear leader among county

[5] It should be noted that this region has different boundaries to the DHS Southern Region

regions, being home to 30% of the signing population. Loddon-Mallee, Hume and Gippsland each host around 20%, while only 12% of the regional signing population live in the Grampians region, as illustrated in Table 4.



	1996	2001	2006
Loddon-Mallee	24%	24%	20%
Hume	17%	27%	19%
Grampians	18%	10%	12%
Gippsland	16%	17%	19%
Barwon-South Western	25%	22%	30%

Figure 4: Distribution of country signing population by region – 1996-2006

As was noted in the previous section the shift in population in regional areas has seen stronger growth in regional cities than in more isolated areas. Given this trend, the lack of a sizable city in the Grampians region has likely contributed to its lower share of the signing population in 2006, while growth in Barwon-South Western's share has almost entirely come from increase in the population in Greater Geelong.

Conclusion

This report has shown that the number of people in Victoria indicating they spoke a sign language increased significantly between the 1996 and 2006 surveys. In both years, the signing population was concentrated in Greater Melbourne, but not markedly more so than the Victorian population as a whole. Within Melbourne, sign language users prefer to live in the Eastern and South-Eastern suburbs, with the Pakenham-Cranbourne growth corridor proving particularly popular. Deaf agencies are thus well advised to monitor this shifting population trend as current rates suggest a high demand for service delivery in Auslan in the outer South-Eastern suburbs in future.

In regional areas, the signing population grew significantly in the municipalities of Ballarat, East Gippsland, Greater Geelong, Greater Bendigo, and Greater Shepparton. With the exception of East Gippsland these are all regional cities and point to a trend of the country signing population concentrating in major towns where access to services is likely to be better than in smaller communities. However, it is important to note that the majority of regional municipalities have at least a handful of sign language users and effectively providing services to this highly dispersed and often isolated population remains a key challenge for Victorian deafness services.

Bibliography

ABS, (Australian Bureau of Statistics). (1997). *1996 Census of Population and Housing*

ABS, (Australian Bureau of Statistics). (2002). *2001 Census of Population and Housing*

ABS, (Australian Bureau of Statistics). (2007). *2006 Census of Population and Housing*

Freeland, Jane & Donna Patrick (Eds.) (2004). *Language rights and language survival*. Manchester: St. Jerome Publishing.

Johnston, Trevor. (1989a). *Auslan Dictionary: A dictionary of the sign language of the Australian Deaf community*. Sydney: Deafness Resources Australia.

Johnston, Trevor. (1989b). *Auslan: The sign language of the Australian Deaf community*. Unpublished PhD Thesis, University of Sydney.

Johnston, Trevor. (2004). W(h)ither the deaf community? Population, genetics and the future of Australian Sign Language *American Annals of the Deaf, 148*(5), 358-375.

Kipp, Sandra, Michael Clyne, & Anne Pauwels. (1995). *Immigration and Australia's language resources* Canberra: Australian Government Printing Service.

Ozolins, Uldis, & Marianne Bridge. (1999). *Sign language interpreting in Australia*. Melbourne: Languages Australia.

Terborg, Roland, & Phyllis Ryan. (2002). The inadequacy of the concept of competence. In Maya Khemlani David (Ed.), *Methodological and analytical issues in language maintenance and language shift studies*. Frankfurt am Main: Peter Lang.

Appendix 1: Sign language users by metro municipality, 2006

	Auslan	Sign Language, N.F.D.	Sign Languages, N.E.C.	Total signers
Banyule	80	3	0	83
Bayside	19	6	0	25
Boroondara	35	4	0	39
Brimbank	27	12	0	39
Cardinia	15	0	0	15
Casey	127	17	0	144
Darebin	44	7	0	51
Frankston	91	3	0	94
Glen Eira	46	9	0	55
Greater Dandenong	53	5	0	58
Hobsons Bay	25	0	0	25
Hume	33	7	3	43
Kingston	53	6	0	59
Knox	64	5	0	69
Manningham	28	3	0	31
Maribyrnong	9	3	0	12
Maroondah	58	11	0	69
Melbourne	16	3	0	19
Melton	15	7	0	22
Monash	87	7	3	97
Moonee Valley	37	0	0	37
Moreland	35	3	0	38
Mornington Peninsula	38	7	0	45
Nillumbik	23	8	0	31
Port Phillip	19	3	0	22
Stonnington	22	0	0	22
Whitehorse	105	6	0	111
Whittlesea	42	6	0	48
Wyndham	64	4	0	68
Yarra	13	0	0	13
Yarra Ranges	63	4	0	67
TOTAL	1386	159	6	1,551

Appendix 2: Sign language users by regional municipality, 2006

	Auslan	Sign Language, N.F.D.	Sign Languages, N.E.C.	total signers
Alpine	0	0	0	0
Ararat	0	0	0	0
Ballarat	33	7	0	40
Bass Coast	3	0	0	3
Baw Baw	7	0	0	7
Benalla	0	0	0	0
Buloke	3	0	0	3
Campaspe	12	3	0	15
Central Goldfields	5	0	0	5
Colac-Otway	8	0	0	8
Corangamite	7	0	0	7
East Gippsland	31	3	0	34
Gannawarra	0	3	0	3
Glenelg	6	0	0	6
Golden Plains	3	0	0	3
Greater Bendigo	65	4	0	69
Greater Geelong	86	9	0	95
Greater Shepparton	43	0	0	43
Hepburn	9	0	0	9
Hindmarsh	0	0	0	0
Horsham	5	0	0	5
Indigo	4	0	0	4
Latrobe	22	3	0	25
Loddon	0	0	0	0
Macedon Ranges	4	0	0	4
Mansfield	0	0	0	0
Mildura	11	3	0	14
Mitchell	20	0	0	20
Moira	10	0	0	10
Moorabool	4	0	0	4
Mount Alexander	0	0	0	0
Moyne	6	0	0	6
Murrindindi	4	0	0	4
Northern Grampians	0	0	0	0
Pyrenees	3	0	0	3
Queenscliffe	3	0	0	3
South Gippsland	7	3	0	10
Southern Grampians	8	0	0	8

	Auslan	Sign Language, N.F.D.	Sign Languages, N.E.C.	total signers
Strathbogie	0	0	0	0
Surf Coast	16	3	0	19
Swan Hill	0	0	0	0
Towong	0	3	0	3
Wangaratta	9	3	0	12
Warrnambool	14	0	0	14
Wellington	25	0	0	25
West Wimmera	0	0	0	0
Wodonga	12	0	0	12
Yarriambiack	0	0	0	0
TOTAL	508	47	0	555

Appendix 3: Change in the metro signing population between 1996 and 2001

	Auslan		Sign Language, N.F.D.		Sign Languages, N.E.C.		Total signers		% Total increase
	1996	*2006*	*1996*	*2006*	*1996*	*2006*	*1996*	*2006*	*1996-2006*
Banyule	19	80	12	3	0	0	31	95	206%
Bayside	7	19	6	6	0	0	13	31	138%
Boroondara	18	35	7	4	0	0	25	46	84%
Brimbank	3	27	8	12	9	0	20	56	180%
Cardinia	0	15	5	0	0	0	5	20	300%
Casey	15	127	31	17	5	0	51	180	253%
Darebin	25	44	21	7	0	0	46	72	57%
Frankston	30	91	10	3	0	0	40	104	160%
Glen Eira	17	46	10	9	4	0	31	69	123%
Greater Dandenong	7	53	7	5	0	0	14	65	364%
Hobsons Bay	3	25	4	0	0	0	7	29	314%
Hume	5	33	6	7	3	3	14	52	271%
Kingston	7	53	19	6	3	0	29	81	179%
Knox	24	64	20	5	0	0	44	89	102%
Manningham	13	28	9	3	0	0	22	40	82%
Maribyrnong	0	9	9	3	3	0	12	24	100%
Maroondah	12	58	3	11	3	0	18	75	317%
Melbourne	5	16	3	3	0	0	8	22	175%
Melton	12	15	3	7	0	0	15	25	67%
Monash	27	87	15	7	3	3	45	115	156%
Moonee Valley	6	37	9	0	0	0	15	46	207%
Moreland	6	35	8	3	0	0	14	46	229%
Mornington Peninsula	22	38	11	7	0	0	33	56	70%
Nillumbik	0	23	5	8	4	0	9	40	344%
Port Phillip	7	19	6	3	0	0	13	28	115%
Stonnington	10	22	3	0	0	0	13	25	92%
Whitehorse	37	105	37	6	0	0	74	148	100%
Whittlesea	8	42	10	6	7	0	25	65	160%
Wyndham	6	64	10	4	0	0	16	78	388%
Yarra	18	13	11	0	4	0	33	28	-15%
Yarra Ranges	15	63	18	4	0	0	33	85	158%
TOTAL	384	1386	336	159	48	6	768	1935	152%

Appendix 4: Change in the country signing population between 1996 and 2006

	Auslan		Sign Language, N.F.D.		Sign Languages, N.E.C.		total signers		% Total increase
	1996	*2006*	*1996*	*2006*	*1996*	*2006*	*1996*	*2006*	*1996-2006*
Alpine	0	0	0	0	0	0	0	0	0%
Ararat	0	0	0	0	0	0	0	0	0%
Ballarat	0	33	10	7	10	0	20	40	100%
Bass Coast	4	3	0	0	0	0	4	3	-25%
Baw Baw	0	7	0	0	0	0	0	7	NA
Buloke	0	3	0	0	0	0	0	3	NA
Campaspe	0	12	3	3	0	0	3	15	400%
Central Goldfields	0	5	0	0	0	0	0	5	0%
Colac-Otway	6	8	4	0	0	0	10	8	-20%
Corangamite	0	7	0	0	0	0	0	7	NA
East Gippsland	3	31	0	3	0	0	3	34	1033%
Gannawarra	0	0	3	3	0	0	3	3	NA
Glenelg	0	6	0	0	0	0	0	6	NA
Golden Plains	0	3	0	0	4	0	4	3	-25%
Greater Bendigo	4	65	17	4	0	0	21	69	229%
Greater Geelong	24	86	8	9	0	0	32	95	197%
Greater Shepparton	0	43	7	0	0	0	7	43	514%
Hepburn	0	9	0	0	0	0	0	9	NA
Hindmarsh	0	0	0	0	0	0	0	0	0%
Horsham	0	5	0	0	0	0	0	5	NA
Indigo	0	4	0	0	0	0	0	4	NA
Latrobe	3	22	5	3	0	0	8	25	213%
Loddon	0	0	6	0	0	0	6	0	-100%
Macedon Ranges	0	4	0	0	0	0	0	4	NA
Mildura	0	11	5	3	0	0	5	14	180%
Mitchell	6	20	9	0	0	0	15	20	33%
Moira	0	10	0	0	0	0	0	10	NA
Moorabool	6	4	0	0	5	0	11	4	-64%
Mount Alexander	4	0	0	0	0	0	4	0	-100%

	Auslan		Sign Language, N.F.D.		Sign Languages, N.E.C.		total signers		% Total increase
Moyne	0	6	0	0	0	0	0	6	NA
Murrindindi	0	4	0	0	0	0	0	4	NA
Northern Grampians	0	0	0	0	0	0	0	0	0%
Pyrenees	0	3	0	0	0	0	0	3	NA
Queenscliffe	0	3	0	0	0	0	0	3	NA
South Gippsland	0	7	0	3	0	0	0	10	NA
Southern Grampians	5	8	0	0	0	0	5	8	60%
Strathbogie	0	0	3	0	0	0	3	0	-100%
Surf Coast	3	16	0	3	0	0	3	19	533%
Swan Hill	0	0	5	0	0	0	5	0	-100%
Towong	0	0	0	3	0	0	0	3	NA
Wangaratta	0	9	4	3	0	0	4	12	200%
Warrnambool	0	14	0	0	0	0	0	14	NA
Wellington	7	25	9	0	0	0	16	25	56%
West Wimmera	0	0	0	0	0	0	0	0	0%
Wodonga	0	12	5	0	0	0	5	12	140%
Yarriambiack	0	0	0	0	0	0	0	0	0%
TOTAL	75	508	103	47	19	0	197	555	182%