Australian Government

Bureau of Rural Sciences

COUNTRY MATTERS

2008 SOCIAL ATLAS OF RURAL AND REGIONAL AUSTRALIA

EDUCATION

DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY

Education and training in rural and regional Australia — people in country areas rising to the challenge

For more information

The 2008 Country Matters: Social Atlas of Rural and Regional Australia is an online tool available at www.brs.gov.au/socialatlas. The Atlas enables you to create and download a customised regional profile containing key social and economic information for any region.

The Atlas has five companion booklets that provide a summary of the Atlas and detailed analyses on four social themes:

- 2008 Country Matters:
  Social Atlas of Rural and Regional Australia — Summary Booklet
- Education and training in rural and regional Australia — people in country areas rising to the challenge
- Changing employment in industries in rural and regional Australia
- Social fabric of rural and regional Australia
- Drought in rural Australia — exploring the social impact in three case study regions.

How do I get a copy?

These booklets and a copy of the Atlas are available for download from the Bureau of Rural Sciences shop at www.brs.gov.au/shop.

Introduction

This release of *2008 CountryMatters: Social Atlas of Rural and Regional Australia* (the Atlas) includes information from the Australian Bureau of Statistics (ABS) *Census of population and housing* (ABS 1996, 2001, 2006). The data contained in the Atlas provide information for many critical social issues affecting rural and regional people, industries and communities. This thematic study uses information in the Atlas to analyse changes in education and training across rural and regional Australia.

Box 1 lists some of the terms used in this thematic study.

Box 1
Terms used

- Major urban centres — population clusters of 100 000 people or more, including capital cities.
- Regional centres — population clusters of 1000 to 100 000 people.
- Small towns — population clusters of 200 to 1000 people.
- Rural areas — less than 200 people.
- Country — includes all the areas outside the capital cities.
- Statistical local area — fundamentally, SLAs are local government areas.
- Place of usual residence — the data are based on the person's place of usual residence on Census night. This means that some people could live in rural areas, but work in a small town or regional centre, explaining why there are numbers of people working in retail, health, manufacturing and government services in rural areas.

Importance of education and training across Australia

Education, training and lifelong learning are building blocks for healthy regions and a healthy national economy (Falk and Kilpatrick 1999). In addition, education is at the heart of both personal and community development, by enabling people to develop their talents to the full (ibid).

The levels of participation in formally recognised education and training institutions are frequently used as indicators or measures of human wellbeing. Human wellbeing, in part, encompasses standards of living (economic prosperity), and the level of social inclusion and social inequity (social disadvantage) experienced by individuals.

Increasing the level of participation in educational and training activities has two distinct benefits:

- for industry, it ensures that there is an ongoing supply of adequately skilled and productive labour (human capital)
- for people, it maintains and fosters increased workforce opportunities and social inclusion while reducing levels of social inequity in Australian society; this is especially important for those who may be marginalised because of gender, social background, age, disability, race, religion or geographic isolation.

Education is the cornerstone of a continuing prosperous society. An increasingly technologically competent and flexible workforce is needed to meet the challenges of industry in the global economy, and to ensure increases in economic growth, productivity and international competitiveness. Education is also important for helping industry to adjust to restructuring and diversification. Increased levels of education and training help to reduce social inequality, and raise the standard of living of individuals, resulting in multiple positive social and economic outcomes.

Education and training also improve skill development and are essential components of personal growth and achievement. They also motivate productive behaviour in industry, the workplace and the community. Education and training no longer stops after formal schooling. People increase their level of education and training throughout their working life and this culture of life-long learning benefits people of all ages and backgrounds.

Importance of education and training in rural and regional Australia

The future of regional Australia depends on an educated and skilled population (Alston 1999). People in rural and regional areas provide most of the human capital for Australia's primary industries, including agriculture, fishing, food and forestry. In turn, small towns, regional centres and their communities rely on these industries for their economic survival.

Australia's primary industries face a number of economic, social, political and environmental challenges, including:

- increasing production costs, compliance costs, and domestic and global competition
- increasing need to adapt to climate change and climate variability
- increasing need to work with natural resources under environmental pressure
- pressing biosecurity considerations
- an ageing population, leading to a limited supply of labour in the future.

Education and training contributes to the capacity of rural communities to manage change, build community capacity and sustain primary industries. Australia has a long history of innovation in providing technological and non-technical solutions to problems and ensuring continued productivity. This innovation is, in part, a result of an ongoing investment in education and training, especially in country areas.

Trends in post-secondary school qualification attainment

The number of people aged 15 to 64 years who have attained a post-secondary school qualification has increased substantially over the decade to 2006. Over this period, 2 506 000 more people attained a post-secondary school qualification. In 2006, 52.5% of the working-age population had attained qualifications, increasing from 41.9% in 1996.

As Figure 1 illustrates, people living in major urban centres have higher levels of education and training. The main reasons for this include the need to work in a wider range of industries and occupations that require high levels of education and training, and closer location to education and training institutions. Figure 1 also illustrates the high level of education for people living in rural areas (49.0% in 2006). People in these areas have almost the same educational level as people living in the major urban centres (54.7%), irrespective of a greater degree of difficulty in accessing institutions and facilities. Small towns had the lowest levels of education (44.9%).

Figure 2 shows that the rate of improvement in educational attainment in the decade to 2006 was much lower for people living in rural areas (1.9% per year) and regional centres (3.4% per year), compared with the national average (4.3% per year). The rate of increase in rural areas was about half the national rate. The greatest improvement in post-secondary school attainment in the decade to 2006 was in small towns (7.4% per year).

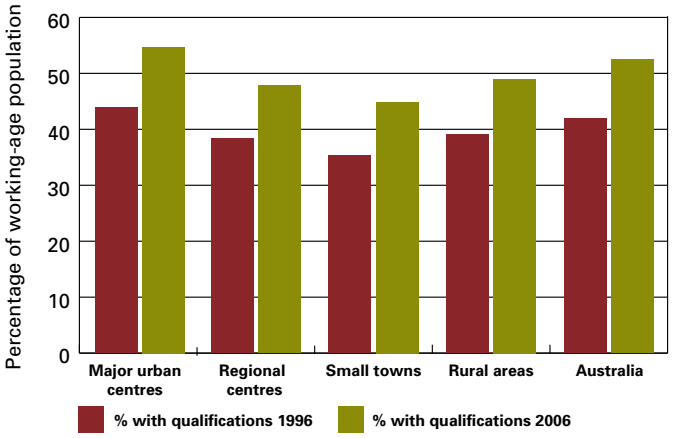


Figure 1 Proportion of working-age population with a post-secondary school qualification in urban and rural areas, 1996 and 2006

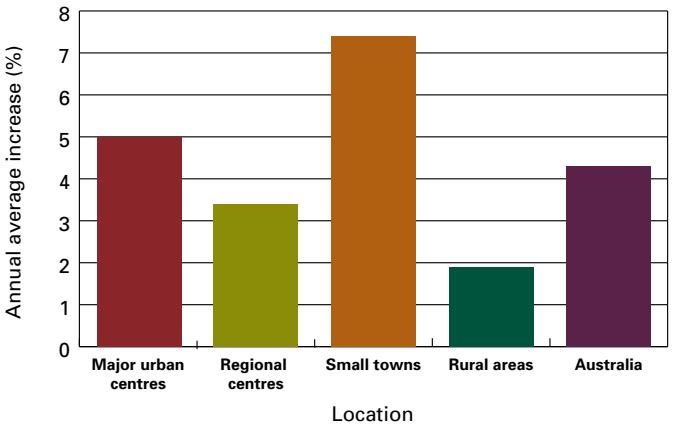
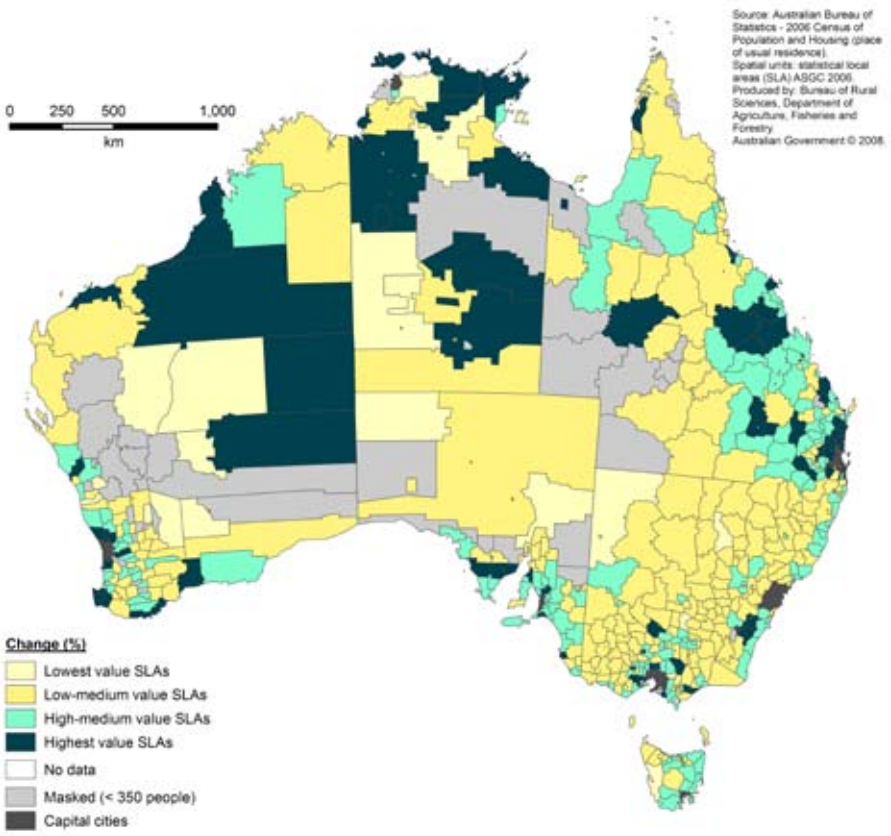


Figure 2 Annual average change in working-age population with a post-secondary school qualification, in urban and rural areas, 1996–06



Map 1 Annual average percentage change in number of working-age people with a post-secondary school qualification, by statistical local area, 1996–06

Map 1 highlights the annual average percentage change in the number of working-age people who have attained a post-school qualification in the 10-year period from 1996 to 2006.

The areas with the highest increases in education attainment were mostly located close to urban and regional centres, which had easy access to a range of education and training institutions. The largest increases were in the areas around Canberra; the Gold and Sunshine coasts, Gladstone and Mackay (all in Queensland); Melbourne; and Perth.

Some of these regions also had high population growth, attracting large numbers of new residents — many with post-secondary school qualifications. Examples include areas on the Gold Coast (Pacific Pines, Kingsholme, Varsity Lakes) and the Sunshine Coast (Caloundra). Other areas with large increases in education attainment included a number of remote regions, although this growth was from a very low base, or had occurred in areas with a small population. Some areas were in regions containing mining (such as Roxby Downs in South Australia).

Areas with high levels of education attainment

Table 1 summarises the areas with high levels of post-secondary school qualifications and training (compared with the Australian average of 52.5%) in 2006.

Table 1 Areas with high levels of post-secondary school qualifications, 2006

Statistical local area	Number of people with qualifications	Proportion of population (%)
Nhulunbuy (NT)	2 869	68.9
Snowy River (A) (NSW)	10 376	67.5
Nebo (S) (QLD)	2 533	66.7
Cairns (C) — City (QLD)	7 924	65.8
Surfers Paradise (QLD)	15 044	65.2
Alice Springs (T) — Stuart (NT)	1 523	64.5
Port Hedland (T) (WA)	6 587	64.2
North Ward-Castle Hill (QLD)	3 479	63.8
Armidale Dumaresq (A) Balance (NSW)	1 902	63.7
Broadbeach (QLD)	7 833	63.6
Main Beach (QLD)	2 787	63.1
East Pilbara (S) (WA)	5 637	62.2
Palerang (A) — Part A (NSW)	4 377	62.0
Roebourne (S) (WA)	9 189	61.7
Greater Geelong (C) — Part C (VIC)	1 502	61.7
Roxby Downs (M) (SA)	2 235	61.2
Queenscliffe (B) (VIC)	1 521	60.8
Ashburton (S) (WA)	3 862	60.7
Noosa (S) (QLD)	6 689	60.6
Sunshine-Peregian (QLD)	4 756	60.6
Weipa (T) (QLD)	1 402	60.2
Newtown (VIC)	4 451	60.1
Alice Springs (T) — Ross (NT)	3 405	60.0
Katherine (T) (NT)	4 425	59.9
Kiama (A) (NSW)	8 920	59.6
Rowes Bay-Belgian Gardens (QLD)	1 339	59.4
South Townsville (QLD)	1 224	59.3
Magnetic Island (QLD)	1 343	59.3
Cairns (C) — Northern suburbs (QLD)	8 183	59.2
Bathurst Regional (A) — Part B (NSW)	2 304	59.1
Surf Coast (S) — East (VIC)	5 746	59.1
Whitsunday (S) (QLD)	10 724	59.0
Cairns (C) — Mt Whitfield (QLD)	5 572	58.9
Douglas (S) (QLD)	6 900	58.8
Surf Coast (S) — West (VIC)	3 955	58.7
Byron (A) (NSW)	13 950	58.4

Note: table includes only those areas with more than 1000 people with qualifications

People with the highest levels of qualifications and training are located in a variety of regions for a number of different reasons. These regions include:

- Weipa, Roebourne, East Pilbara, Roxby Downs — areas close to mining industries that require people with qualifications and training
- Cairns, Surfers Paradise, Palerang, Queenscliffe — regions that have a range of different industries (tourism, business, administration and services) that require qualifications
- Armidale, Bathurst — regional centres with educational institutions.

Other possible reasons for areas with high rates of people with post-secondary school qualifications include:

- social norms that reflect a high acceptance and community encouragement of adult learning and training within family and community structures
- the introduction of flexible learning in education and training (such as competency-based learning)
- employment, workplace and safety regulations that require individuals to have formal qualifications for jobs that previously did not require any qualifications
- continuous changes in the complexity of work, requiring greater technical and professional skills
- high-quality telecommunications infrastructure for distance or internet-based education and training.

Areas with low levels of education attainment

Table 2 summarises the areas with low levels of post-secondary school qualifications and training (compared with the Australian average of 52.5%).

Table 2 Areas with low levels of post-secondary school qualifications, 2006

Statistical local area	Number of people with qualifications	Proportion of population (%)
Corio — Inner (VIC)	18 107	42.2
Mildura (RC) — Part A (VIC)	15 475	43.1
Bundaberg (C) (QLD)	15 716	43.1
Greater Shepparton (C) — Part A (VIC)	14 809	43.6
Rockhampton (C) (QLD)	21 114	45.0
Cessnock (C) (NSW)	16 486	45.9
Hervey Bay (C) — Part A (QLD)	19 156	46.2
Greater Taree (C) (NSW)	16 605	46.8
Launceston (C) — Part B (TAS)	22 595	47.4
Newcastle (C) — Outer west (NSW)	15 830	47.5
Shellharbour (C) (NSW)	21 862	47.8
Mandurah (C) (WA)	20 826	48.4
Tamworth Regional (A) — Part A (NSW)	16 212	48.5
Mackay (C) — Part A (QLD)	27 277	48.5
Tweed (A) — Tweed Heads (NSW)	21 309	48.6
Great Lakes (A) (NSW)	13 476	48.9
Maitland (C) (NSW)	23 059	49.1
Dubbo (C) — Part A (NSW)	13 036	49.5
Wagga Wagga (C) — Part A (NSW)	20 577	49.6
Wollongong (C) Balance (NSW)	35 051	49.6

Note: table includes only those areas with more than 1000 people with qualifications

Most of these areas are major regional centres that have a variety of education institutions. The low levels of education attainment in these areas are surprising. Possible reasons may be the cost of courses, availability and access, older-age populations, or a lack of appreciation of the link between education and better job prospects. However, further analysis is needed before the reasons for low education attainment in these areas can be understood.

Many small and remote areas also had low levels of education attainment — often below 20.0%. A number of the non-remote areas had older age profiles and were some distance from regional centres with education institutions. For example, Southern Mallee, in Victoria, had an education attainment level of 35.9%, and Yarriambiack — in the Wimmera in Victoria — had an attainment level of 35.8%. However, not all areas with low levels of education attainment were remote — a number were located close to regional centres, including Urana in the southern Riverina in New South Wales (36.1% education attainment), Mount Morgan, near Rockhampton in Queensland (36.2%), Berri (36.3%) and Loxton (36.5%, both in the Riverland of South Australia), and Balranald on the Murray River in western New South Wales (37.2%).

Further research is needed to determine the reasons why some areas have low numbers of people with post-secondary school qualifications, however, it may indicate:

- social norms that reflect a relatively low acceptance and community encouragement of adult learning and training within family and community structures
- an older age profile of the population or a high proportion of retired people
- inadequate access to education and training opportunities
- inadequate telecommunication infrastructure
- barriers due to the high costs associated with education and training.

Trends of people with a bachelor degree or vocational qualifications

Many more people in Australia have vocational qualifications than a bachelor degree (3 784 000 people versus 2 477 000 people, respectively). As Figure 3 shows, in 2006, nearly one-quarter (23.8%) of the working-age population had vocational qualifications, compared with the much smaller proportion with degrees (15.6%). The difference was even more pronounced in rural areas and small towns, where vocational qualifications are more relevant to the type of work in which people are engaged.

However, in the decade to 2006, the number of people obtaining degrees increased by 7.1% each year, while the number of people obtaining vocational qualifications increased by 3.9% each year. The number of people with a degree has increased at nearly double the rate of that for people with a vocational qualification. In the decade to 2006, people in rural areas had the lowest level of increase for both bachelor degrees and vocational qualifications (see Figure 4).

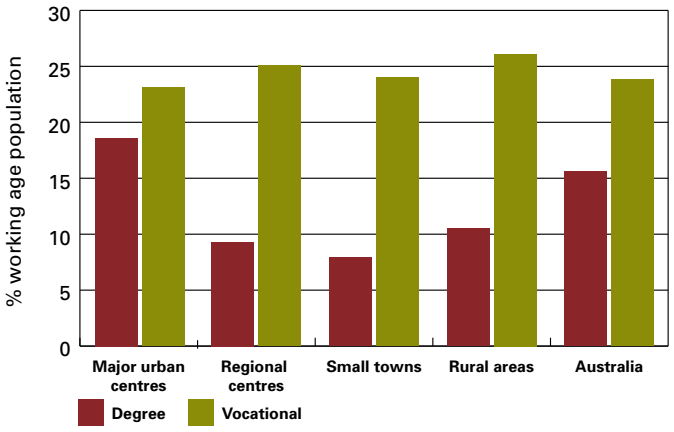


Figure 3 Proportion of working-age population with a bachelor degree or vocational qualification, 2006

Figure 4 also shows that small towns had the greatest increase in the number of people with a degree and the second greatest increase in the number of people with vocational qualifications. The increase in the number of people with these qualifications was lower in rural areas.

Areas with high levels of attainment for vocational qualifications

The areas with the highest levels of vocational qualifications were in the areas around Melbourne, Sydney, Canberra and Perth, and around regional centres with easy access to vocational educational institutions. Some remote communities also had high levels of vocational qualifications. The highest levels occurred in the remote Torres Strait communities of Seisia (39% of the population), Kubin (37.2%) and Warraber (34.8%), and in Nhulunbuy (35.4%) and Weipa (32.8%, both in the Gulf of Carpentaria, Queensland). The non-remote areas with the highest levels of vocational qualifications included Capel (near Bunbury, 32.4% of the population), Greater Hume Shire (near Albury, 31.8%), Kiama (south coast of New South Wales, 30.9%), Adelaide Hills (outskirts of Adelaide, 30.9%), and Kingsholme-Upper Coomera (Gold Coast, 30.9%).

The largest increases in the proportion of the population with vocational qualifications were scattered throughout remote and non-remote areas of Australia. Areas with a moderate level of increase (up to 30.0%) were throughout most of the eastern states, southern South Australia and southwest Western Australia. The largest increases included the periurban areas around the capital cities, as well as southeast Queensland and around Mackay. These areas included Pacific Pines-Gaven (Gold Coast, increasing by 161.8%), Kingsholme-Upper Coomera (Gold Coast, increasing by 140.9%), Douglas (near Cairns, increasing by 136.2%), and Capel (near Bunbury, increasing by 126.6%). These large increases may have been caused by population movement into these areas, frequently including people with vocational qualifications.

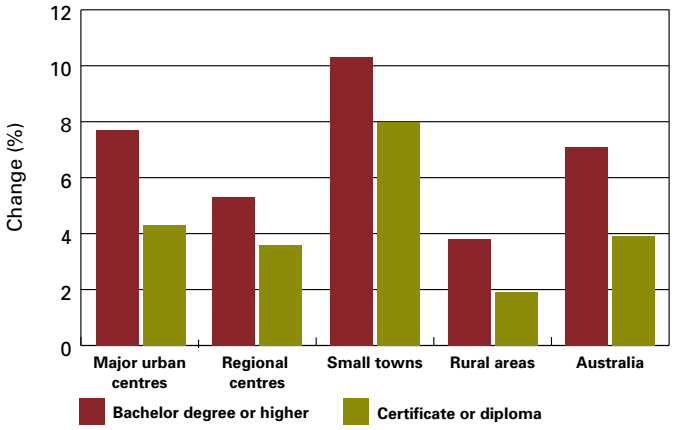


Figure 4 Annual percentage increase in the number of people with a bachelor degree or higher versus vocational qualification, 1996–06

Reasons for the high (and increasing) rates of people with vocational qualifications include:

- personal (and parental) acceptance of the value of vocational qualifications in the workforce
- increased access to technical and further education and training institutions
- introduction of flexible learning in education and training (for example, competency based learning)
- increasing employment, workplace and safety regulation that requires individuals to have formal qualifications for jobs, where they were not previously required
- the continuous changing complexity of work that requires greater technical skills
- high-quality telecommunications infrastructure for distance or internet education and training.

Areas with low levels of attainment for vocational qualifications

Remote regions of central Australia and some rural inland areas had the lowest levels of people with vocational qualifications. The lowest levels were in remote Indigenous communities — for example, Tapatjatjaka (south of Alice Springs) and Angurugu (in east Arnhem Land) both had less than 3.0% of the population with vocational qualifications. The lowest levels of people with vocational qualifications in non-remote locations included Swan Hill (in northwest Victoria, 14.1% of the population), Balranald (in southern New South Wales, 16.2%) and Karooda East Murray (east of Adelaide, 16.2%).

In the decade to 2006, the largest decreases in the proportion of people with vocational qualifications occurred in the remote areas of South Australia, Western Australia, western New South Wales and Victoria, and central and northern Queensland.

Remote and rural areas with large decreases in the proportion of people with vocational qualifications included Mount Magnet (remote central Western Australia, 48.4% decrease), Kalgoorlie-Boulder (remote southern Western Australia, 49.1% decrease), and Yalgoo (central Western Australia, 43.3% decrease) and the remote Indigenous community of Aurukun (Gulf of Carpentaria, Queensland, 40.5% decrease). Other areas with a decrease in the proportion of the population with vocational qualifications included Millmerran (west of Brisbane, 9.4% decrease), Trayning (east of Perth, 7.7% decrease), Brewarrina (northwest New South Wales, 5.0% decrease), and Urana (southern New South Wales, 4.7% decrease).

Possible reasons for the low (and decreasing) rates of people with vocational qualifications include:

- a preference (and ability) for the population to opt for higher educational qualifications instead of vocational
- personal (and parental) lack of acceptance of the value of vocational qualifications in the workforce
- lack of access to technical and further education institutions.

Trends of young people remaining in full-time education

Young people are the future workforce. If Australia is to remain a prosperous country, it requires a high percentage of young people remaining in education beyond the age of 16 (about Year 10) to maximise their education. Strategies are used to encourage young people to continue at school until Year 12. A smooth transition into the future labour force and suitable employment is closely correlated with young people remaining in full-time education beyond the age of 16 years.

In 1996, 81.3% of 16-year-olds remained in full-time education across Australia; in 2001, this number had increased to 83.2%, but in 2006 it decreased to 81.7%. From 2001 to 2006, major urban centres experienced a 4.3% increase in the number of 16-year-olds in full-time education, and small towns experienced a 2.4% increase. In contrast, rural areas and regional centres had decreases in the number of 16-year-olds in full-time education (1.8% decrease and 0.5% decrease respectively; see Figure 5).

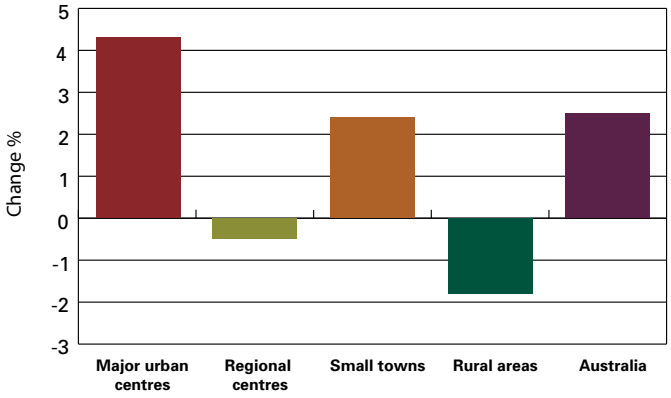


Figure 5 Percentage change in the number of 16-year-olds remaining in full-time education, 2001–06

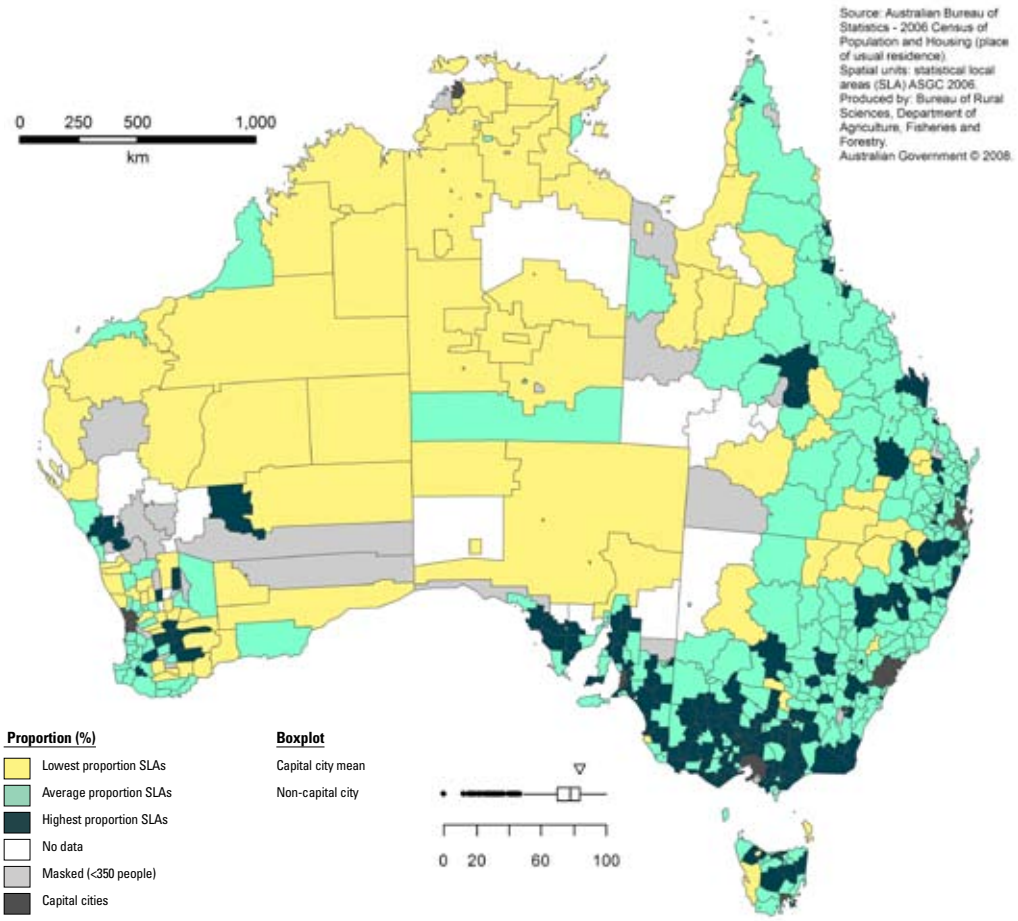
Part of the reason for the decrease in retainment in full-time education in rural areas and regional centres may be population decrease (including people aged 16 years). Low rates of 16-year-olds remaining in full-time education could lead to reduced workforce opportunities for these people in the future, and signal potential shortages in the availability of skilled labour.

Low education retention rates of 16-year-olds in rural areas and regional centres may be the result of (Alston 1999):

- closure of local schools
- high turnover of teachers, and a lack of understanding of the culture, values and lifestyles in small towns, rural areas and regional centres
- an increase in the number of people from rural areas attending boarding schools
- limited resources in subject areas, such as technology and sport
- limited subject choices at school
- lack of local employment prospects and lack of inspiration or encouragement for young people to remain at school.

Areas with high levels of young people remaining in school

Areas with a high percentage of retention of 16-year-olds in school included much of Victoria, Tasmania, southwest Western Australia, southeast Queensland and eastern New South Wales. Areas with 100% retention of 16-year-olds in full-time education included Latrobe and George Town (in Tasmania), Broomehill, Kent, Caballing (all in southwest Western Australia), Unincorporated Riverland and Southern Mallee (both in southeastern South Australia), Aramac (central western Queensland), and Queenscliff, Buloke and Loddon (all in regional Victoria). Map 2 shows the proportion of 16-year-olds in full-time education in 2006.



Map 2 Proportion of 16-year olds in full-time education, 2006

The largest increases in the percentage of 16-year-olds in full-time education included the high population growth areas of Pacific Pines-Gave (272.5%), Kingsholme-Upper Coomera (121.5%), Varsity Lakes (119.3%, all on the Gold Coast) and Rosslea (near Townsville, Queensland, 116.7%). Other large increases occurred in Elliston (Eyre Peninsula South Australia, 166.7%), Beverley (south Western Australia, 142.9%), and Latrobe (northern Tasmania, 125%). Part of the reason for these large increases was likely to be the high levels of population movement into these areas, often by people with young families.

Areas with low levels of young people remaining in school

The areas with the lowest levels of retention of 16-year-olds in school included a number of remote Indigenous communities (Borroloola, 22.0% retention; Angurugu, 16.0%; Woorabinda, 16.0%; and Halls Creek, 12.0%). Other remote areas with low levels of retention included Cranbrook (Western Australia, 36.0% retention), Robe (South Australia, 40.0%), Jericho (Queensland, 40.0%), Brewarrina (New South Wales, 42.0%), Coolgardie (Western Australia, 42%), Murrumbidgee (New South Wales, 54%), Central Darling (western New South Wales, 45.0%), Eidsvold (Queensland, 55.0%), Bruce Rock (62.0%) and Brookton (62.0%, both in Western Australia), Dalby (Queensland, 65.0%), and Goyder (South Australia, 70.0%). Non-remote areas with low levels of retention included the central suburbs of Cairns (56.0% retention), Yarrabah (outside Cairns, 57.7%), West Coast (including Queenstown Tasmania, 58.4%) and Broome (north coast Western Australia, 59.9%).

Conclusions

Historically, people living in small towns and rural areas had lower levels of education and training attainment compared with people living in regional centres and major urban centres. This has largely been due to a lack of access to educational institutions because of distance, transport and the cost of obtaining qualifications, and because the demand for an educated workforce in industries located in country areas has traditionally been low. This has now changed.

People living and working in country areas require higher levels of education and training than in the past so they can work in rapidly evolving primary and rural-based industries. Over the decade to 2006, the number of people with post-secondary school qualifications, who live in small towns, has increased at a much faster rate than the national average, but the increase for people living in rural areas has been much less than the national average. There has been little improvement in retaining young people in full-time education past the age of 15 years over the decade to 2006. This could lead to skills shortages and problems in engaging young people in employment and community activities in rural and regional areas in the future.

Increasing levels of education and training in country areas will allow more people to participate in a range of employment opportunities throughout Australia and lead to positive outcomes for people (including young people, Indigenous people and women), reduce the incidence of poverty and disadvantage, and lead to better social inclusion outcomes for communities throughout Australia.

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