

EDUCATIONAL DISADVANTAGE AND REGIONAL AND RURAL SCHOOLS

Abstract

While there is much to be valued in regional and rural education, studies in Australia have identified location and isolation as key dimensions of additional need in the provision and delivery of education. Forty years ago, in the report to the Australian Schools Commission, Karmel identified several aspects of educational disadvantage experienced by schools in country areas – including high teacher turnover, low retention rates, less confidence in the benefits of education, limited cultural facilities in the community, lack of employment opportunities for school completers, and a less relevant curriculum – that led to lower levels of attainment (Karmel, 1973). These issues are still relevant today. This study uses a range of indicators, including National Assessment Program – Literacy and Numeracy (NAPLAN) results, attainment, post-school transition and student engagement and well-being data, to set out some of the dimensions of rural and urban differences in schooling. Results show that some, but not all, of the challenges facing regional and rural schools arise from the social, economic and community differences between city and rural environments.

Stephen Lamb

*Mitchell Institute for Health and Education Policy,
Victoria University*

Sara Glover

*Mitchell Institute
for Health and
Education Policy,
Victoria University*

*Dr Sara Glover is the
Director of Research
and Education Policy
at the Mitchell
Institute for Health
and Education Policy
at Victoria University,
in Melbourne. The*

Mitchell Institute is a new think tank – its mission is to identify and tackle critical and complex health and education issues in Australia, create policy networks and influence public policy.

Sara is a highly regarded policy and research expert in the field of education. Most recently she was an Executive Director at the Victorian Department of Education and Early Childhood Development, where she was responsible for the strategic development of an integrated research and evaluation program to deliver a powerful evidence base for policy and practice. Prior to her role in state government, Sara was the Director of Education and Training and a principal researcher at the Centre for Adolescent Health at the Royal Children's Hospital/University of Melbourne for 8 years.



Anne Walstab

Victoria University

In 2013, the Organisation for Economic Co-operation and Development (OECD) reported an 'urban advantage' in student performance in every country that participated in the Programme for International Student Assessment (PISA) 2009 (OECD, 2013). The average urban–rural gap in performance translated to about 20 PISA score points, or the equivalent of half a year of schooling. Research in Australia also suggests that young people living in rural and isolated parts of the country have poorer educational and labour market outcomes than their urban counterparts (e.g. Lamb & Mason, 2008). One reason for this is that urban areas offer better employment prospects, particularly for highly skilled workers, and families in rural and regional areas tend to have lower levels of socioeconomic status, backgrounds more often correlated with lower academic achievement and poorer outcomes. However, the OECD observed that differences in student socioeconomic background explained only part of the performance gap between students who attend urban schools and those who attend schools in non-urban (rural and regional) areas. So what can account for the urban and rural and regional differences?

This paper presents an analysis of the urban–rural/regional education gap, followed by a discussion of the factors contributing to the gap. The paper draws mainly on data from the state of Victoria because of the availability of relevant school and student information provided by the Victorian Department of Education and Early Childhood Development.

Defining rural and regional

In this study, 'rural' and 'regional' refer to locations outside urban centres that have populations of 100 000 or more, which for Victoria means locations outside Melbourne and Geelong. Combining measures of population sparsity (persons per square kilometre) with scores from the Accessibility/Remoteness Index of Australia (ARIA) provided a means for ranking schools and populations and dividing them into seven categories:

1. Major city (Melbourne and Geelong)
2. Provincial city (e.g. Ballarat and Bendigo)
3. Provincial centre (e.g. Mildura, Swan Hill)
4. Large town (e.g. Leongatha, Lorne)
5. Small town (e.g. Terang, Skipton)
6. Rural (e.g. Bright, Donald)
7. Remote (e.g. Orbost).

The urban–rural/regional education gap

Achievement

In Victoria, as early as Year 3, students from urban schools outperform students from rural and regional schools in reading. Figure 1 shows mean scores in reading by location for students attending government schools. The mean score for students in major city areas is about 20 points higher than for students in other locations, and the scores are consistently lower across all rural and regional locations. A gap of around 22 points represents about 7 months learning, on average, if the points on the NAPLAN scale are translated into weeks of learning.

One of the factors driving rural and regional gaps in achievement is the difference in educational attainment of parents and communities. Rural and regional students are more likely than urban students to come from families with lower socioeconomic backgrounds. The parents of rural students tend to be less educated and less likely to be employed in professional occupations, such as doctors, lawyers and bankers. For example, while nearly six in ten adults living in Melbourne have completed Year 12, this falls to four in ten in provincial centres and one in three adults in rural and remote areas. These differences, however, do not explain all of the gap in performance between urban students and rural and regional students. When scores are adjusted to take into account population differences in socioeconomic status and other differences, the urban–rural literacy gap is reduced, but not eliminated, suggesting that population differences alone do not account for the size of the literacy gap. There appears to be a 'rural' and 'regional' factor or dimension that is at play (see the second panel of Figure 1).

Figure 2 presents relative achievement gains in literacy from Year 3 to Year 5. The results show that outside the major city areas, the NAPLAN achievement gains in reading are lower, and lower across all regions. A difference of about 8 points equates to about 3 months less literacy skill acquisition from Years 3 to 5. This applies to children in provincial centres, large towns and remote areas compared to students in major cities. It suggests that rural and regional children already behind at Year 3 make lower NAPLAN gains on average to Year 5, and at Year 5 therefore fall further behind.

Attendance

Absenteeism and school attendance are measures of student engagement. Absence rates, measured as

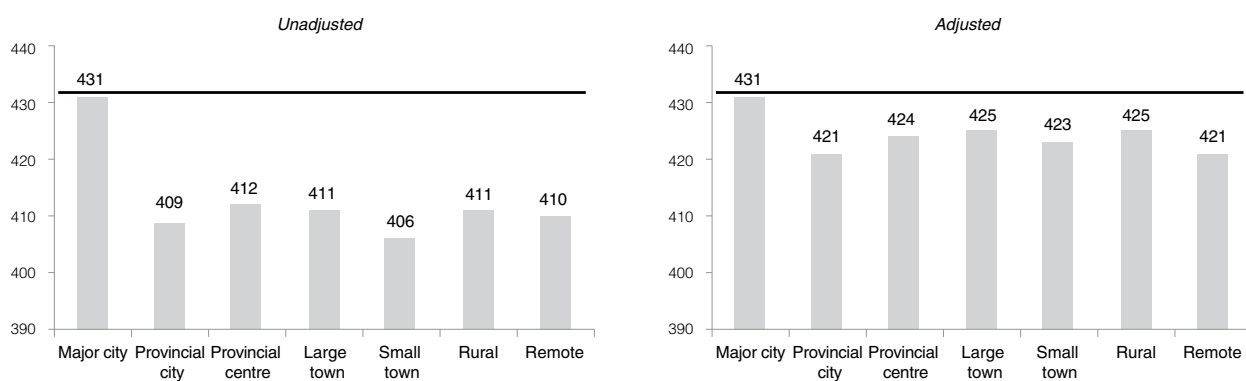


Figure 1 Year 3 mean NAPLAN reading scores, by location: unadjusted and adjusted mean scores for students in government schools, 2012

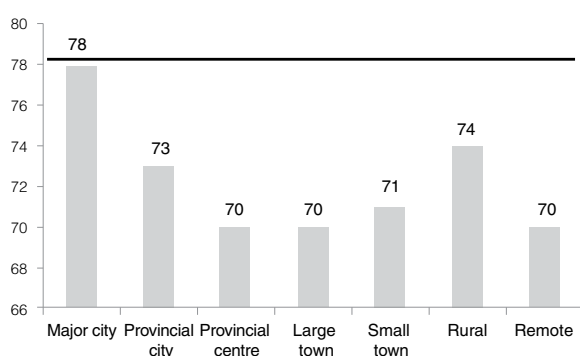


Figure 2 Mean NAPLAN gain scores in reading: Year 3 to Year 5, government schools

Table 1 VCE and VCAL attainment by location (2007 Year 9 cohort, all students)

| | VCE completion (%) | VCAL completion (%) | All completion (%) |
|-------------------|--------------------|---------------------|--------------------|
| Major city | 68 | 6 | 74 |
| Provincial city | 58 | 7 | 65 |
| Provincial centre | 56 | 8 | 64 |
| Large town | 53 | 6 | 59 |
| Small town | 55 | 6 | 61 |
| Rural | 54 | 8 | 62 |
| Remote | 60 | 6 | 66 |

the average number of days absent from school per student, are higher in rural and regional areas. Major city students are absent, on average, for 16 days, or about three weeks a year. Provincial city students are absent for about 23 days, or four and a half weeks a year, while the rate for students in provincial centres is 18.8 days, in large towns 20.3 days, in small towns 22.4 days, in rural areas 19.4 days and in remote areas 17.1 days. So on average, students in rural and regional

areas receive less classroom learning time than city students, by virtue of being absent from school.

Year 12 certificate completion

Year 12 completion rates are lower in rural and regional areas. In a statewide 2007 Year 9 cohort of government and private school students tracked until 2012, rates varied by location, as shown in Table 1. Nearly three-quarters

of students in the major city regions completed the Victorian Certificate of Education (VCE) or Victorian Certificate of Applied Learning (VCAL), attaining Year 12 at a higher rate than students across all rural and regional locations. Overall completion rates were lowest in large towns, followed by small towns and rural areas.

Year 12 achievement

With fewer students completing VCE, meaning an over-selected population of completers, it might be expected that rural and regional students would achieve study scores on more equal terms with major city students. However, even here there are differences. For example, the mean VCE English study scores, English being a subject taken by most students, vary by region as shown below.

| | |
|-------------------|------|
| Major city | 30.9 |
| Provincial city | 28.2 |
| Provincial centre | 28.6 |
| Large town | 27.6 |
| Small town | 28.7 |
| Rural | 28.3 |
| Remote | 29.2 |

The gaps in student scores between regions are not necessarily large, but the scores for rural and regional students are consistently lower. There is some improvement for students in remote areas, but students in large and small towns and remote areas have, on average, the lowest scores.

Transition from school

Students living in rural and regional areas face greater vulnerability in transition from school to further study and work. Using results from the *On Track* survey (Department of Education and Early Childhood Development, 2012) on the destinations of the 2010 Year 12 completers surveyed in 2011, about six months after leaving school, 13.4 per cent of major city students were looking for work or in part-time work only, compared to 21.7 per cent in provincial cities, 19.8 per cent in provincial centres, 23.0 per cent in large towns, 18.4 in small towns and rural areas, and 19.3 per cent in remote areas. Young people in rural and regional areas more often find themselves in a less secure and more marginalised position after leaving school.

They are also less likely to access university study. The proportion of Year 12 school leavers surveyed as part of *On Track* who were enrolled at university varies substantially by location. From major city areas, 54.2 per cent of the 2010 cohort of Year 12 leavers were at university in 2011, compared to 36.1 per cent of leavers from provincial cities, 37.6 per cent from provincial centres, 32.3 per cent from large towns, 33.9 per cent from small towns, 36.5 per cent from rural areas and 42.4 per cent from remote locations.

These findings regarding the post-school destinations of rural young people are reinforced by other studies that have shown that remoteness and proximity to education services influence the education and labour-force activities of young people across Australia once they leave school (Lamb & Mason, 2008). The proportion of 19-year-olds in full-time education decreases markedly with level of remoteness. Almost half of all city dwellers are in full-time education compared to just 5.8 per cent of those in the most remote areas of Australia. Conversely, the proportion of young Australians in the more precarious position of no full-time work and no full-time study increases with level of remoteness.

What accounts for urban–rural/regional differences in educational outcomes?

While economic conditions, linked to industry structure and occupational and employment opportunities that provide greater returns on investment in education for urban populations, are likely to play a part in the urban–rural/regional education divide, school provision factors are also relevant.

School size

Rural and regional schools tend to be smaller than urban schools. This can have a number of disadvantages as well as benefits for rural and regional students. On the one hand, class sizes tend to be smaller; students enjoy more individual attention from their teachers, and teachers often know most, if not all, the students. On the other hand, smaller schools tend to have fewer resources, are often less able to employ specialist staff or offer specialist subjects or programs, have to use composite multigrade classes, provide fewer opportunities for professional development, have more difficulty recruiting and retaining teachers, provide less support for special needs students and offer fewer options for courses.

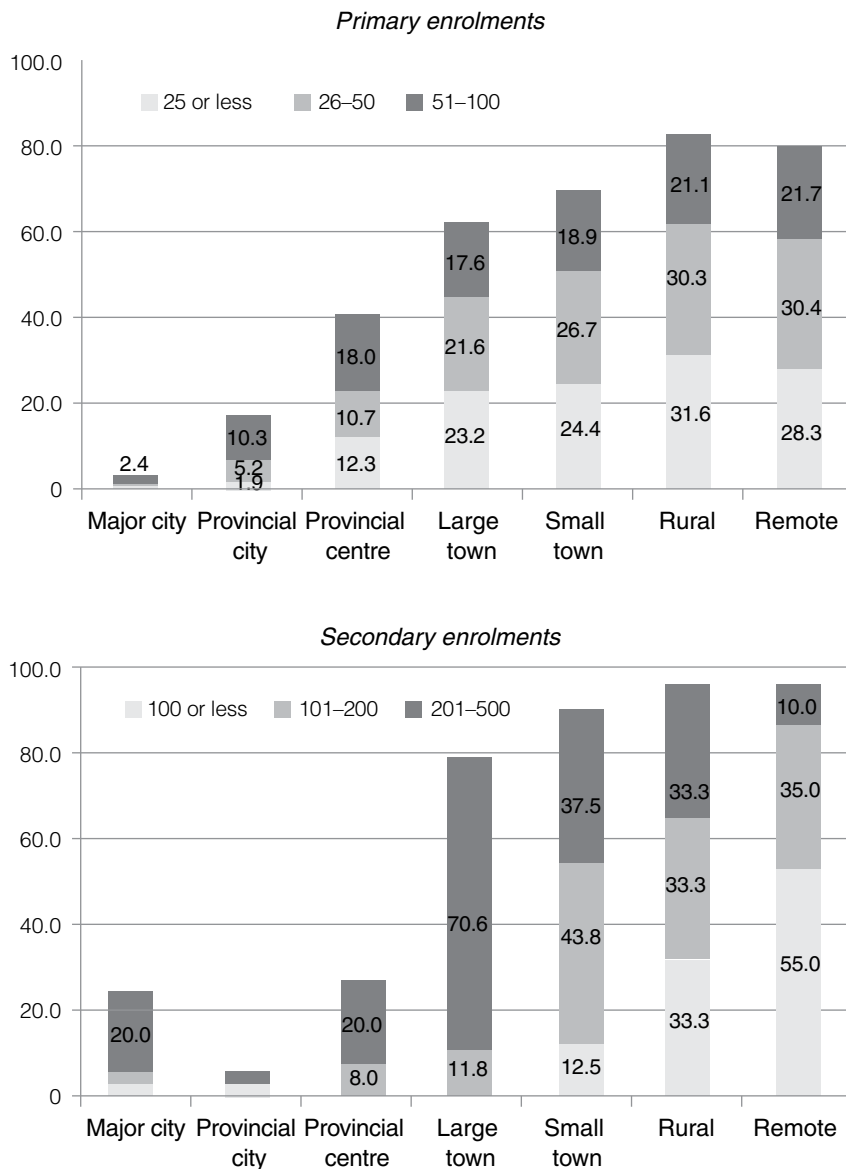


Figure 3 Distribution of small government schools across areas, by school size (number of enrolments)

Figure 3 shows the relationship between school size and location. For schools with primary enrolments, it is clear that school size decreases with remoteness. There are very few small schools (less than 100 enrolments) in the cities, but from large towns moving outward, more than half of the schools with primary enrolments have fewer than 100 students, and for rural and remote schools the figure jumps to 80 per cent. Small schools dominate in the rural and remote areas, where there are many with fewer than 25 enrolments.

Nearly all schools with secondary enrolments in large town through to remote locations have fewer than 500 students, whereas in the more urbanised areas

there are very few secondary schools with fewer than 500 enrolments. Small school size is a structural feature of rural secondary provision.

School staffing

Smaller schools have fewer teachers and potentially less flexibility, thanks to their funding and resources. Research for this study found that rural and regional schools tend to have a more expensive teacher profile, as they have a higher proportion of Principal Class and Leading Teachers relative to all teachers. For example, the proportion of 'accomplished' and 'graduate' teachers declines with remoteness, making up 31 per cent of all

teachers in remote primary schools compared to 50 per cent in city schools. In small schools, principals are more likely to be undertaking classroom teaching, which also adds to the costs of the staffing profile in large and small towns, and rural and remote areas, where small schools are concentrated.

In addition to the classification and cost profiles of staff linked to school size and location is the capacity for schools to employ specialist teachers, such as music and physical education staff. With much smaller budgets linked to size, primary schools in particular across rural and remote areas are much more constrained in their capacity to employ specialist staff.

Program breadth

The tendency for schools in rural and remote areas to be smaller in size exerts increased resource pressures on these schools in their pursuit of the same educational goals as schools in city areas. From a simple fiscal viewpoint, smaller schools are less efficient because they have higher per capita funding needs to provide the same level of services provided in larger schools (Lamb, Rumberger, Jesson & Teese, 2004). Large high schools have traditionally been considered more economical and able to support a broader curriculum than smaller ones (Lee, Smerdon, Alfeld-Liro & Brown, 2000). As schools contract in size, they lose resource flexibility and their program options are more limited. This is the case for Victorian rural schools, where there is a substantial impact on program breadth at the senior secondary level, with fewer options for VCE and fewer options for Vocational Education and Training (VET) in Schools.

An examination of VCE options delivered in different regions shows there are some subjects without any enrolments in rural and remote areas, including Classical Studies; English Language; English (ESL); Environmental Science; History (Renaissance Italy); Music Style and Composition; Philosophy; Religion and Society; Sociology; and Theatre Studies.

An analysis of the mean number of VCE units available by school size is also revealing. Small schools of fewer than 500 enrolments make, on average, 16 subjects available to their senior students. This is just over half the number available at large schools of over 1500 secondary enrolments (30 subjects). Similarly, there are fewer VET in Schools certificates on offer outside the major city areas, as well as reduced offerings at the higher Australian Qualifications Framework levels. Course areas not offered outside cities include Applied Design, Fashion, Dance, and Sport and Recreation.

Smaller schools, more often located in rural and remote locations, cannot by virtue of their size deliver the same number of subject options, yet curriculum breadth is needed to retain students in school and address diversity of student interests and needs.

Capacity to raise funds

As schools become more isolated, their capacity to supplement government income with locally raised funds (LRF) is also more limited, largely due to their size. Rural and regional schools are less able to raise funds from their school communities. In 2012, primary schools in Melbourne were able to raise on average \$262 000 from LRF (\$728 per capita). Primary schools in remote areas, however, were able to raise \$30 000 on average (\$642 per capita). The rate in rural areas is the equivalent of being able to employ an extra teacher two days per week, while the rate in major city areas is an additional three full-time teachers.

Conclusion

This analysis of the educational outcomes of students in rural/regional and urban schools shows that rural and regional students do not perform as well as their urban counterparts. The gaps are primarily related to differences between rural and urban communities, in particular the average educational attainment of adults in the community, community industry and labour force conditions, and the educational requirements and earning capacity of jobs in the community.

Studies in other countries point to the importance of community factors and the need for responses recognising the role of community. A Canadian study reporting sizeable rural and urban gaps in education showed that the differences were most strongly related to community factors (Cartwright & Allen, 2002). The factors were characterised in rural areas by lower levels of educational attainment in the adult population, fewer, lower paid jobs, and jobs not requiring tertiary qualifications. The authors theorise that these variables, related to the educational level of jobs in the community, limit the educational aspirations of the students because young people become aware of the lack of employment opportunities in their community requiring high-level qualifications (Cartwright & Allen, 2002). Within the community, students are also less likely to have contact with adults who are able to demonstrate the value of good literacy skills (Canadian Council on Learning, 2008). Low aspirations within a

community are a significant barrier to students seeking and undertaking educational opportunities (The Senate Rural and Regional Affairs and Transport References Committee, 2009).

Even after considering the effects of community characteristics, there are many school characteristics that can influence student performance. Rural schools are smaller and more expensive to operate, they are more likely to experience teacher shortages, and they have fewer resources (OECD, 2013). For students attending rural schools, the impact of location can mean fewer opportunities for involvement in cultural activities and for experiencing the performing and visual arts; fewer opportunities for social interaction with peers; and restricted access to the range of work/career role models and to information about careers and the range of adult life opportunities (Victorian State Board of Education, 1985). For schools and teachers, the effects of location include limited opportunity for involvement in broad policy discussions, limited opportunities for professional exchange and development, restricted access to support systems such as specialist resources, and restricted access to resource provision.

References

- Canadian Council on Learning. (2008). *Closing Canada's rural/urban literacy gap*. Ontario: Canadian Language and Literacy Research Network.
- Cartwright, F., & Allen, M. K. (2002). *Understanding the rural-urban reading gap*. Ontario: Statistics Canada.
- Department of Education and Early Childhood Development. (2011). *The On Track survey 2011: The destinations of school leavers in Victoria state-wide report*. Melbourne: Author.
- Karmel, P. (1973). *Schools in Australia: Report of the Interim Committee of the Australian Schools Commission*. Canberra: Australian Government Publishing Service.
- Lamb, S., & Mason, K. (2008). *How young people are faring '08*. South Melbourne: Foundation for Young Australians & Education Foundation.
- Lamb S., Rumberger R., Jesson J., & Teese R. (2004). *School performance in Australia: Results from analyses of school effectiveness: Report for the Victorian Department of Premier and Cabinet*. Melbourne, Victoria: Department of Education and Training.
- Lee, V. E., Smerdon, B. A., Alfeld-Liro, C., & Brown, S. L. (2000). Inside large and small high schools: curriculum and social relations. *Educational Evaluation and Policy Analysis*, 22, 147–71.
- Organisation for Economic Development and Co-operation (OECD). (2013). What makes urban schools different? *PISA in Focus*, 28.
- The Senate Rural and Regional Affairs and Transport References Committee. (2009). *Rural and regional access to secondary and tertiary education opportunities*. Canberra: Commonwealth of Australia.
- Victorian State Board of Education. (1985). *The changing context and structures of postcompulsory schooling in Victoria: Education in rural areas. Working Paper No. 10*. Melbourne: State Board of Education.