

# Part IV

## HOW WELL ARE AUSTRALIA'S CHILDREN LEARNING AND DEVELOPING?

A child's learning and development is integral to their overall health and wellbeing, as well as the future productive capacity of society. Current government priorities are geared towards developing an early childhood development strategy which focuses on ensuring that all 4 year old children have access to early childhood education programs in the year before full-time schooling. Attendance at early childhood education programs has been found to have beneficial effects on a child's readiness for school and their ability to transition to full-time schooling, particularly among disadvantaged children. Transition to primary school is also affected by other factors such as child health, family characteristics, and the home and community environment.

Successful educational outcomes during the primary school years and beyond are affected by a number of factors, including school attendance and the successful acquisition of literacy and numeracy skills.

The early childhood years are also crucial for social and emotional development which encompasses a broad range of skills that children need to develop in order to succeed at school, and in life generally.

The aim of *Part IV* is to provide a picture of children's development with regards to early learning, the primary school years, and their overall social and emotional development. Key indicators addressed are:

- attending early childhood education programs
- transition to primary school
- attendance at primary school
- literacy and numeracy
- social and emotional development.

The following table shows how children fare across the various indicators presented in *Part IV*.

Indicator		Value	Trend
<b>Attending early childhood education programs</b>	Proportion of children attending an educational program in the 2 years before beginning primary school	Data not available	..
<b>Transition to primary school</b>	Proportion of children entering school with basic skills for life and learning	National data not available	..
<b>Attendance at primary school</b>	Attendance rate of children at primary school (Year 5) (2007)	85–95%	..
<b>Literacy and numeracy</b>	Proportion of children in Year 5 who achieved at or above the national minimum standards (2008)		
	... reading	91%	..
	... numeracy	93%	..
<b>Social and emotional development</b>	Under development	Data not available	..

Key: .. = no trend data presented.

## 13 Attendance at early childhood education programs

Attendance at high-quality early childhood educational programs contributes to optimal child development, including cognitive development and successful transition to primary school.

National data are not available on children attending an early educational program in the 2 years before beginning primary school.

Many Australian children have access to formal early learning programs through attendance at child care or preschool. Preschool is a planned education and developmental program for children in the year (or sometimes 2 years) before they begin full-time primary education. The program is planned and delivered by a university-qualified early childhood teacher.

Attendance at early childhood educational programs is considered to have a number of benefits, including better intellectual development and independence, sociability and concentration, language and cognitive development, and preparation for the successful transition to formal schooling. It is also associated with a lower incidence of personal and social problems in later life, such as school dropout, welfare dependency, unemployment and criminal behaviour (Gorey 2001). The quality of early childhood education has an important effect on child outcomes—high-quality preschooling, including staff with higher qualifications, is related to better intellectual and social/behavioural development (Harrington 2008).

Preschool programs may be especially positive in the lives of children from disadvantaged backgrounds, where children may not be receiving the stimulation they require from the home environment. The Effective Provision of Pre-School Education study, which followed the developmental progress of over 3,000 preschool children across England, found that the increased risk of antisocial or worried behaviour among disadvantaged children at school entry can be reduced by high-quality preschool care at 3 and 4 years of age (Sylva et al. 2003). Studies in the United States have shown that children from low socioeconomic backgrounds attending focused, high-quality early education programs also have improved long-term outcomes. Campbell and

colleagues (2002) found that these children achieved high levels of emotional, intellectual and social development at age 21 and, in a separate study, Schweinhart and colleagues (2005) identified better performance over a range of outcomes, including education, economic performance, family relationships and health, at age 40 from the High/Scope Perry Preschool Program. Investing in good-quality preschool provision is therefore likely to be an effective means of developing children's social competency and emotional health (Boyd et al. 2005), and may narrow existing gaps in academic achievement, particularly among disadvantaged populations.

Attending early childhood education programs has been endorsed by the AHMC, CDSMC and the AESOC as a Children's Headline Indicator priority area (see *Part X* for further information). The Council of Australian Governments (COAG) has also committed to providing universal access to early childhood education programs to all 4 year olds for 15 hours per week, for a minimum of 40 weeks per year, by 2013; with a particular focus on Indigenous 4 year olds in remote Indigenous communities (DEEWR 2008e).

### HOW MANY CHILDREN ATTEND AN EARLY EDUCATIONAL PROGRAM?

It is difficult to estimate the number of children who participate in formal early childhood education programs in the years before the first year of primary schooling due to the varied nature of children's services throughout Australia and differences in data collection between states and territories. Currently, no comprehensive, national, comparable collection of information on early childhood education programs exists in Australia.

Preschool has various names in different Australian states and territories, including kindergarten, child-parent centres, and pre-primary. The age at which a child attends primary school differs between states and territories, and therefore the age at which a child attends an early childhood education program may also differ. Participation in early childhood education programs is usually for children in the year before school (generally 4 year olds), although it is open to 3 year olds in some jurisdictions.

Development of a Children's Services National Minimum Data Set (CSNMDS) has been completed with the publication of the final report in February 2007 (NCSIMG 2007). The CSNMDS, endorsed by the Community and Disability Services Ministers' Advisory Council (CDSMAC) in 2006, aims to provide nationally comparable and comprehensive data about the provision of child care and preschool services including information about the children who use the services, the service providers and their workers. The AIHW has examined the feasibility of implementing the CSNMDS and found that most states and territories have not incorporated the CSNMDS data items into their collections due primarily to cost and feasibility issues. However, all jurisdictions felt that the data items in the CSNMDS would be a useful start if there was an agreement to establish a national collection.

The AIHW and the ABS are currently working together to develop national data standards for the performance indicators of the National Partnership Agreement on Early Childhood Education. Data standards in the CSNMDS will be used as the basis for this work.

**Headline Indicator:** Proportion of children attending an educational program in the 2 years prior to beginning primary school

Information on children aged 3–4 years attending preschool or long day care is presented here, in the absence of available data to address the Headline Indicator of attendance at an educational program in the 2 years before beginning primary school.

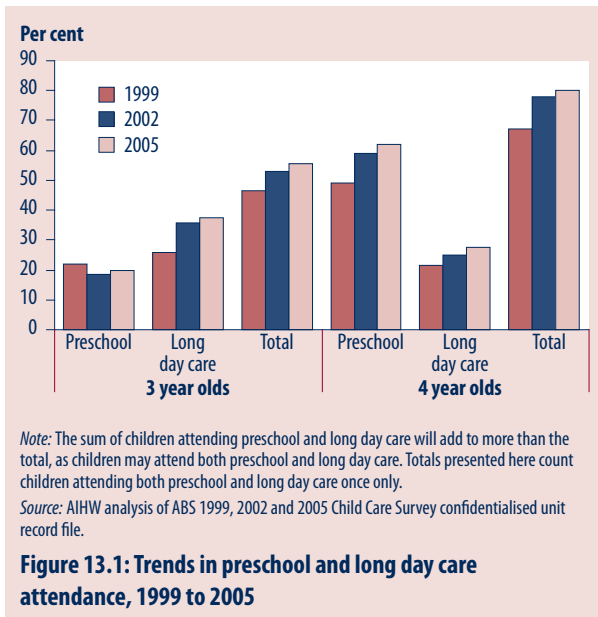
The ABS Child Care Survey, a population-based survey, is one of a number of sources of information on children attending early childhood educational programs across Australia. The major benefit of this survey is that it captures both government and private child care and preschool services. However, it has a number of limitations:

- The survey may undercount the number of children attending preschool due to differences in terminology and starting age of preschool in different states and territories.
- Data are reported by parents and may be affected by their ability to accurately recall or identify the type of setting or learning program in which children are participating.
- The term 'preschool', as used in the survey, encompasses a number of learning environments other than state-based preschools, but may not include all educational programs in long day care centres and other settings. While the ABS 2008 Childhood Education and Care Survey (not available for this report) will enable improved identification of these, it remains subject to the other limitations of the 2005 survey.

Data presented here give a broad indication of the number of children attending early educational programs planned and delivered by a university-qualified early childhood teacher, as well as a range of other structured programs across the various settings. However, it will overestimate the number of children attending an early childhood educational program.

According to the ABS 2005 Child Care Survey:

- In the survey reference week, 68% of children aged 3–4 years (343,100 children) attended preschool or a long day care centre—attendance at either preschool or long day care was greater for 4 year olds (80%) than for 3 year olds (56%) (Figure 13.1).
- A higher proportion of 3 and 4 year olds attended preschool or long day care than in 1999. Attendance increased by around one-quarter in both settings for 4 year olds, whereas attendance by 3 year olds increased in long day care (40% increase), but decreased in preschool (14% decrease).
- The most common reasons given by parents for using preschool or long day care were work-related (including work, looking for work and work-related study or training) (34%), to prepare child for school (23%) and because it was considered beneficial for the child (21%).
- Children in couple-parent families were more likely to attend preschool (43%) than children in one-parent families (31%). However, the reverse was true for long day care centres, (40% of children in one-parent families compared with 31% of children in couple families). These patterns may be explained by one-parent families requiring the longer hours of operation provided by long day care centres.



**Figure 13.1: Trends in preschool and long day care attendance, 1999 to 2005**

### Educational programs in long day care centres

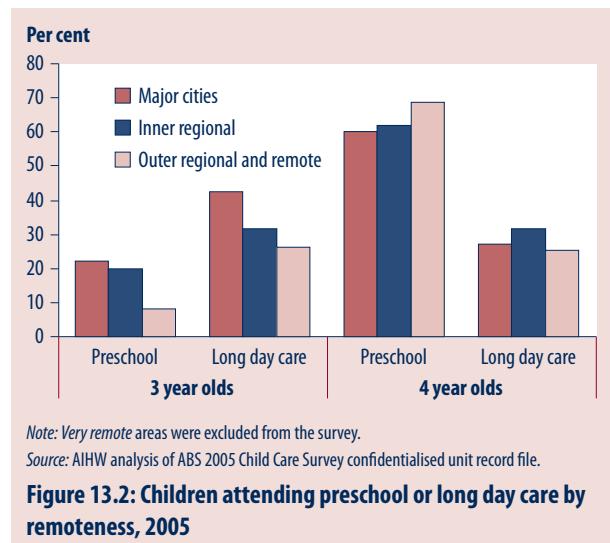
The Australian Government Census of Child Care Services collects information on children in Australian Government-approved and supported child care services who attend a preschool program run by a qualified early childhood teacher in long day care services. According to the 2006 Census of Child Care Services:

- Nearly half (48%) of long day care services offered a preschool program. Two-thirds of these programs were provided in-house, 28% of services took children to a preschool and 5% of services offered both an in-house program and took children to a preschool.
- Of the 186,000 children in an Australian Government-supported long day care service, 62% of children aged 3–4 years attended a long day care service that offered a preschool program (DEEWR 2008a).

### DO ALL CHILDREN ACCESS EARLY EDUCATIONAL PROGRAMS EQUALLY?

There were substantial differences in children’s attendance at preschool and/or long day care by geographical remoteness in 2005, particularly for 3 year olds. However, as the ABS Child Care Survey excludes those living in very remote areas, this information does not provide a full picture on children accessing programs in remote Australia. According to the ABS 2005 Child Care Survey:

- Attendance at preschool increases with remoteness for 4 year olds (from 60% in *Major cities* to 69% in *Outer regional and remote areas combined*), but declines considerably for 3 year olds (22% in *Major cities* and 8% in *Outer regional and remote areas combined*) (Figure 13.2).
- Long day care attendance for 3 year olds was higher in *Major cities* than in *Outer regional and remote areas combined* (43% compared with 26%), while there was no clear pattern for 4 year olds.



**Figure 13.2: Children attending preschool or long day care by remoteness, 2005**

## 14 Transition to primary school

Children entering school with basic skills for life and learning have higher levels of social competence and academic achievement, increasing their likelihood of achieving their full potential.

Based on data from 60 communities, one-quarter of children were developmentally vulnerable in one or more developmental areas of the Australian Early Development Index in 2004–2007. National data will be available in the future.

Children entering school with basic skills for life and learning are more likely to experience a successful transition to primary school. Schooling transition issues relate to emotional competence, capacity for engagement with others and resilience in meeting the demands of schooling. Children who make a successful transition to school have higher levels of social competence and academic achievement compared with those who experience difficulty making this transition (Shepard & Smith 1989). Conversely, children who enter school not yet ready for school-based learning have lower levels of academic achievement, and are at an increased risk of teenage parenthood, mental health problems, committing criminal activity and poorer employment outcomes (Farrar et al. 2007).

Issues around the transition to full-time primary school for children are discussed under a number of conceptual theories, including readiness for learning and readiness for school. Readiness to learn refers to the level of development at which a child is ready to undertake the learning of specific materials; readiness for school refers to the level of development at which a child can fulfil schooling requirements and understand the curriculum. School readiness can be described in terms of age, stage of development, a demonstrated set of skills, or relationships and interactions (Dockett & Perry 2007). In most countries school entry is based solely on age—in Australia some states offer school entry as early as 4 years and 7 months. Recently, the understanding of what constitutes school readiness has been broadened from focusing on these child factors, such as age or specific skills and competencies, to shared responsibilities of families, schools and communities in providing the

environments and experiences that support the healthy development of children (Farrar et al. 2007). Dockett and Perry (2007) discuss three dimensions of school readiness: a child's readiness for school; the school's readiness for children; and family and community supports and services that contribute to the child's readiness.

Factors that affect the school readiness of children at individual, family and community levels include socioeconomic status; child health; family characteristics such as family type, parental education and mental health; the home and community environment; and participation in a quality preschool program (Farrar et al. 2007). A number of studies, including the Effective Provision of Pre-School Education study in the United Kingdom and the High/Scope Perry Preschool Program in the United States, have demonstrated the effectiveness of high-quality, targeted preschool programs in reducing the effects of social disadvantage, developing children's social competency and emotional health, and preparing children for a successful transition to formal schooling (Boyd et al. 2005; Sylva et al. 2003; see also *Chapter 13 Attendance at early childhood education programs*).

Transition to primary school has been endorsed by the AHMC, CDSMC and the AESOC as a Children's Headline Indicator priority area (see *Part X* for more information). In addition, COAG has initiated a series of reforms to early childhood development through the Productivity Agenda, including increasing access to, and improving the quality of, early childhood education programs and early learning experiences in child care. These reforms are being progressed with the states and territories through the COAG process (COAG 2008a).

## CHILDREN ENTERING SCHOOL WITH BASIC SKILLS FOR LIFE AND LEARNING

There is currently no nationally consistent system for assessing children’s readiness for a successful transition to school; however, the Australian Government has committed to the national implementation of the Australian Early Development Index (AEDI), commencing in 2009. COAG has also endorsed the AEDI as a national progress measure of early childhood development in Australia.

The AEDI, a population measure of children’s development, collects information on five developmental domains: physical health and wellbeing; social competence; emotional maturity; language and cognitive skills; and communication skills and general knowledge of children at school entry (see also *Part XI* and *Appendix 2* for more information). The AEDI provides information on early childhood development, including how prepared children are to make the successful transition to school, and provides insight into the effects that communities and social environments have on children’s outcomes. The AEDI has the potential to measure progress over time in improving early childhood development outcomes. Between 2004 and 2007, the AEDI was implemented in 60 communities across Australia, and surveyed 37,420 children.

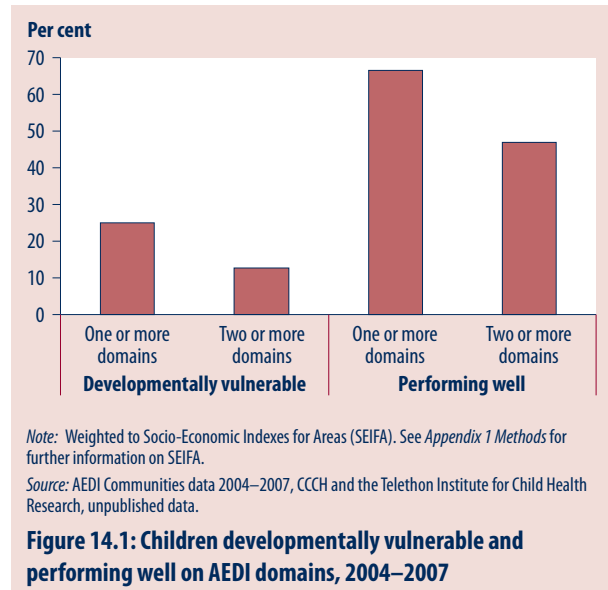
**Headline Indicator:** Proportion of children entering school with basic skills for life and learning

For each of the five developmental domains on the AEDI, ‘cut-off’ scores are developed below which children are considered to be developmentally vulnerable or ‘at risk’. Children scoring below these cut-offs demonstrate a much lower than average ability in the skills measured in that domain. Cut-off scores are also developed to identify children who are performing well, meaning that they demonstrate above-average ability in that domain.

Between 2004 and 2007, in the 60 communities in which the AEDI was implemented:

- The majority of children (two-thirds) were performing well on one or more domains, and almost half (47%) were performing well on two or more domains (Figure 14.1).

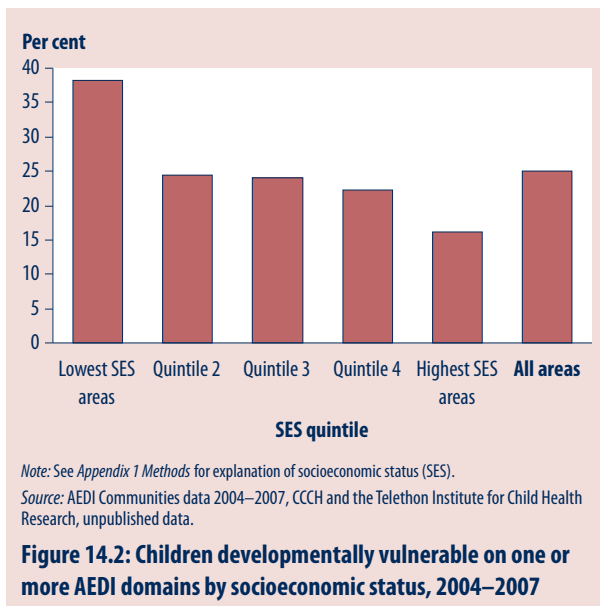
- One-quarter of children surveyed were developmentally vulnerable on one or more developmental domains. These children may have difficulty making a successful transition to school.
- About 13% of children were developmentally vulnerable on two or more developmental domains. These children are considered to be at particularly high risk developmentally.



## How do children from disadvantaged backgrounds perform on the AEDI?

Children from socioeconomically disadvantaged backgrounds generally do not perform as well academically as other children. High-quality, targeted preschool programs have been shown to reduce the effects of social disadvantage, and may narrow these existing gaps in academic achievement. The development of socially and culturally appropriate processes and programs is important for the success of transition programs for any child or group of children (Dockett & Perry 2007; Perry et al. 2007).

Between 2004 and 2007, in the 60 communities in which the AEDI was implemented, children in the lowest socioeconomic status (SES) areas were twice as likely to be developmentally vulnerable on one or more domains of the AEDI as those in the highest SES areas. However, in the highest SES areas, there were still 15% of children developmentally vulnerable on one or more domains (Figure 14.2).



## 15 Attendance at primary school

Attendance at primary school is a key national education goal, as children who are absent from school miss out on critical stages of development and are less likely to achieve educational and life success.

In 2007, the attendance rate across the states and territories for Year 5 students was between 85% and 95%. Indigenous students generally had a lower attendance rate than non-Indigenous students.

Primary school provides the first compulsory educational experience for Australian children, and regular school attendance is critical to successful student outcomes. School attendance helps children develop the basic building blocks for learning and educational attainment, and social skills, such as friendship building, teamwork, communication skills and healthy self-esteem. Regular attendance and participation in schooling is therefore an important factor in educational and life success. However, children who are regularly absent from school are at risk of missing out on these critical stages of educational development and may experience long-term difficulties with their learning, which may result in fewer educational and employment opportunities. Absenteeism can also exacerbate issues of low self-esteem, social isolation and dissatisfaction (Vic DHS 2007b).

The importance of all children attending primary school is not restricted to Australia or developed countries, but is increasingly being recognised worldwide as a crucial factor in children's development and wellbeing. Achievement of universal primary education (that is, enrolment, attendance and completion) has been identified as one of the eight United Nations Millennium Development Goals (UNICEF 2009).

A child's health affects whether or not they attend school, and their ability to learn and participate in school activities (MCEETYA 2001). A high proportion of Indigenous children experience chronic health problems, such as middle ear infection and nutritional deficiencies, which negatively affects their school attendance and learning outcomes (ABS & AIHW 2005). Further, Indigenous students have higher rates of absenteeism and suspension, and lower retention rates than non-

Indigenous students (Bourke et al. 2000), which limits their future life choices and ability to achieve their full potential. Increasing attendance at primary school for disadvantaged populations, particularly for Indigenous children, will help to reduce the considerable gap that currently exists in academic achievement between population groups within Australia. The Western Australian Aboriginal Child Health Survey has shown a direct relationship between the number of days absent from school and academic performance (Zubrick et al. 2006).

Attendance at primary school has been endorsed by the AHMC, CDSMC and the AESOC as a Children's Headline Indicator priority area (see *Part X* for further information).

### HOW OFTEN DO CHILDREN ATTEND PRIMARY SCHOOL?

School attendance is commonly measured in either of two ways: it can be determined using enrolments (that is, the children who have registered with a school) and by attendance (the children who are actually going to school). This chapter focuses on children who are attending school, as distinct from those who are enrolled, as enrolment at school does not necessarily reflect the child's attendance.

Data for this chapter are drawn from the *National report on schooling in Australia 2007* (MCEETYA 2009). This is relatively new information, and there is still some variation in how the information is collected between states and territories, and school sectors. Attendance data are available by year level and state and territory for each school sector (government, Catholic or independent). The data cannot currently be aggregated beyond this

level, and therefore the attendance of Year 5 students has been selected as the focus for this chapter, in line with data presented in *Chapter 16 Literacy and numeracy*.

**Headline Indicator:** Attendance rate of children at primary school

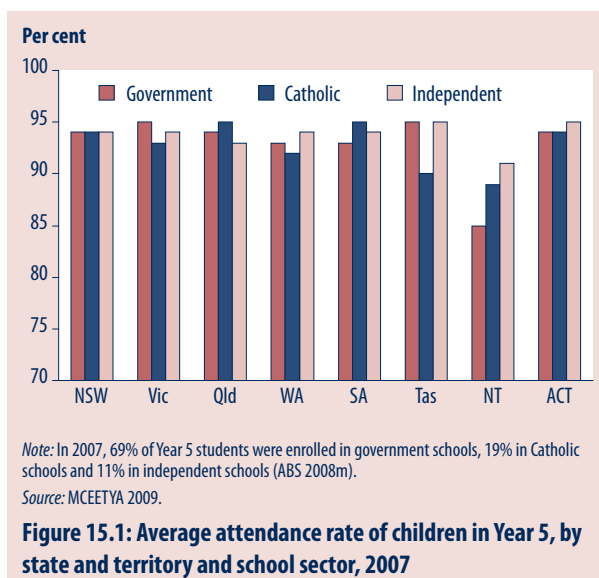
There was little variation in attendance across years 1 to 7 within each school sector and state or territory. Boys and girls had similar rates of attendance in government schools for these year levels, as was generally the case in Catholic schools. More variation between the sexes was seen in the independent school sector, with boys more often having a higher attendance rate than girls (MCEETYA 2009).

In 2007, for Year 5 students the attendance rate ranged between 85% and 95%:

- Excluding the Northern Territory, the attendance rate across the states and remaining territory and across the three school sectors (government, Catholic and independent) was 90% or above (Figure 15.1).
- The lowest attendance rates were reported for the Northern Territory (85% for government schools, 89% for Catholic schools and 91% for independent schools). This is likely to be related to the high proportion of Indigenous Year 5 students in the Northern Territory (41% compared with 1–7% in the other states and territories; ABS National Schools Statistics Collection, unpublished data), who have lower rates of school attendance (MCEETYA 2009).

## Do rates of school attendance vary for Aboriginal and Torres Strait Islander children?

School attendance among Aboriginal and Torres Strait Islander students is of particular concern. In 2007, Indigenous Year 5 students generally had lower attendance rates than non-Indigenous students. For example, in the government school sector (where about 89% of Indigenous Year 5 students were enrolled) the difference between the Indigenous and non-Indigenous attendance rates for the majority of the states and territories was between 5 and 7 percentage points. Further information on school attendance among Indigenous students is provided in *Part IX*.



## 16 Literacy and numeracy

A national education goal is for every child leaving primary school to be numerate and able to read, write and spell at an appropriate level.

In 2008, 91% of Year 5 students met the national minimum standards for reading and 93% for numeracy, with proportions substantially lower among Indigenous students and students living in remote parts of Australia.

Just as language development in early childhood lays the foundation for formal education, literacy and numeracy skills acquired in the schooling years are the building blocks for further educational attainment, social development and employment. A national education goal is for every child leaving primary school to be numerate and able to read, write and spell at an appropriate level.

Literacy means more than just being able to read and write—literacy is integrally related to learning in all areas of the curriculum and enables individuals to develop knowledge and understanding. Numeracy is also central to many areas of education, and also life outside of school. It allows problems to be analysed and solved, is important in many types of employment, and helps people manage their day to day lives.

A number of factors are associated with children's level of literacy and numeracy, including the home environment and engagement with the school environment. In the home, the number of books available, the amount of time parents spend discussing books with their child, the presence of study aids (desk, computer and dictionary) and the educational attainment of parents have been associated with literacy and numeracy levels. Although children from low-income families are more likely to have problems that interfere with learning outcomes, the relationship between socioeconomic disadvantage and educational outcomes can be mediated by the home environment—with access to reading materials and parental encouragement to read at home, students from disadvantaged backgrounds have been found to outperform students with relative socioeconomic advantage but lower levels of reading engagement (Clark & Akerman 2006; Farrar et al. 2007; OECD 2002). In terms of the school environment, children

who engage in school activities and express positive feelings towards school are more likely to have higher educational aspirations, grades and retention to Year 12.

In 2008, the Australian Government established the National Curriculum Board to develop a national curriculum for students from kindergarten to Year 12, initially with a focus on English, mathematics, the sciences and history. The national curriculum is expected to be developed by 2010 and implemented in all states and territories from 2011. One of the aims of the board is to produce a continuum of learning in literacy and numeracy as students progress in their schooling (National Curriculum Board 2009).

Literacy and numeracy have been endorsed by the AHMC, CDSMC and the AESOC as Children's Headline Indicator priority areas (see *Part X* for further information and state and territory data), and are consistent with the COAG Performance Measure to 'increase the proportion of young people meeting basic literacy and numeracy standards, and improve overall levels of achievement' (COAG 2006).

### NATIONAL LITERACY AND NUMERACY MINIMUM STANDARDS

National minimum standards have been developed for reading, writing, spelling, language conventions (grammar and punctuation) and numeracy for students in years 3, 5, 7 and 9. Students who achieve the minimum standards have demonstrated at least the basic understanding required for their year level. In 2008, the first National Assessment Program—Literacy and Numeracy (NAPLAN) tests were conducted. For the first time, students in each state and territory sat the same tests, allowing the

consistent assessment of students across Australia. There is now a common and continuous reporting scale used for all students in years 3, 5, 7 and 9, which provides considerably more information about student achievement than was previously available (MCEETYA 2008b).

This chapter presents reading and numeracy results for students in years 3, 5 and 7—results are expressed in terms of the percentage of students who met the national minimum standard. Although data are collected for children in years 3, 5, 7 and 9, the Year 5 results have been identified as the most appropriate to report for this Headline Indicator. By Year 5, students have had an opportunity to build on the outcomes achieved in Year 3 and are able to demonstrate progress across several years of schooling. Year 3 is considered to be too early to reliably reflect the influence of early interventions on students' outcomes.

#### Headline Indicators:

Proportion of children in Year 5 achieving at or above the national minimum standards for reading

Proportion of children in Year 5 achieving at or above the national minimum standards for numeracy

In 2008:

- Most Year 5 students met the minimum standards for reading (91%) and numeracy (93%) (Table 16.1).
- A higher proportion of girls in Year 5 achieved the minimum standard for reading: 93% compared with 89% of boys. The poorer performance of boys in reading has been attributed to a tendency for boys to be less interested and engaged in reading activities. It is also thought that boys are less likely to be encouraged to read and more likely to experience anxiety about reading (Malloy & Botzakis 2005). No statistically significant difference was seen between the proportion of Year 5 boys and girls who met the numeracy minimum standard.

- Among Year 3 students, 92% met the reading and 95% met the numeracy minimum standards; the corresponding proportions among Year 7 students were 94% and 95%. Again, a higher proportion of girls met the reading minimum standard in both Year 3 and Year 7; however, there was little or no statistically significant difference between boys and girls for numeracy.

The introduction of a new assessment system (the NAPLAN) in 2008 meant that data could not be compared with results from previous years. For the period 2001–2007, the proportion of Year 5 students meeting the reading and numeracy benchmarks remained much the same (ranging from 88% to 90% for reading and 89% to 91% for numeracy) (MCEETYA 2008c).

### How do population groups vary in meeting reading and numeracy minimum standards?

Some groups of students do not perform as well against the national reading and numeracy minimum standards. In particular, Indigenous students, children living in remote areas and children whose parents were not in paid work or who had lower levels of educational attainment often did not achieve the same educational outcomes as other Australian children. These groups are also more likely to leave school early (ABS 2006b; Lamb et al. 2000; MCEETYA 2008b).

In 2008, for Year 5 students:

- Indigenous students were less likely to have achieved the reading and numeracy minimum standards—63% and 69% respectively; 28 and 24 percentage points lower than for all students (Figure 16.1; see also *Part IX*).
- Students in *Remote* and *Very remote* areas were less likely to meet the reading and numeracy minimum standards than those in *Metropolitan* areas—for reading 80% and 46% of students respectively,

**Table 16.1: Students in years 3, 5 and 7 achieving at or above the national reading and numeracy minimum standards, 2008 (per cent)**

	Boys		Girls		Children	
	Reading	Numeracy	Reading	Numeracy	Reading	Numeracy
Year 3	90.3	94.6	94.1	95.5	92.1	95.0
Year 5	89.3	92.8 *	92.8	92.5 *	91.0	92.7
Year 7	92.8	95.4 *	95.6	95.3 *	94.2	95.4

\* The difference between boys and girls at the same year level is not statistically significant at the 5% level of significance.

Source: MCEETYA 2008b.

compared with 92% of students in *Metropolitan* areas. For numeracy, the corresponding proportions were 83% and 54%, compared with 94% (Figure 16.1). These patterns may be influenced by the high proportion of Indigenous students in *Remote* and *Very remote* areas, and the poorer performance of these students.

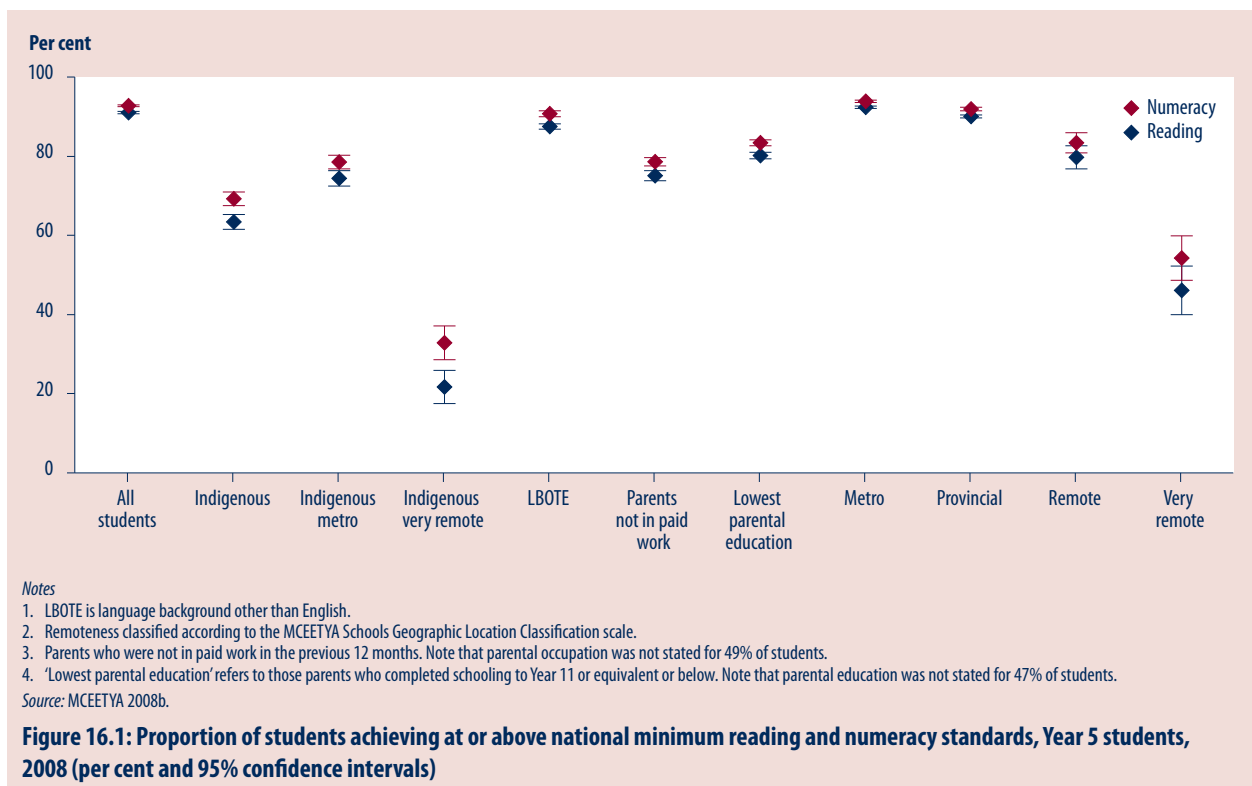
- The proportion of students with a language background other than English who met the minimum standards was similar to that for all students for reading and numeracy.
- A smaller proportion of students whose parents had not been in paid work in the previous 12 months met the minimum standards (75% for reading and 79% for numeracy compared with 91% and 93% of all Year 5 students, respectively).
- Students of parents with the lowest levels of educational attainment were less likely to achieve the minimum standards (80% for reading and 83% for numeracy)—16 and 14 percentage points lower, respectively, compared with students of parents with the highest level of educational attainment (Figure 16.1; MCEETYA 2008b).

### How does Australia perform internationally in reading, mathematics and science?

Internationally, awareness of the social and economic consequences of underachievement in literacy and numeracy has highlighted the importance of monitoring these core educational outcomes (OECD 2007; UN 2005). Internationally comparable literacy and numeracy benchmark data are not available for primary school-aged students; however, data are available from the Programme for International Student Assessment (PISA) surveys on proficiency in reading, mathematics and science among 15 year old students. In 2006, 30 OECD countries and 27 partner countries participated.

PISA results show that in 2006, among the 30 OECD countries:

- Australia's mean scores for reading (513), mathematics (520) and science (527) were significantly higher than the PISA-reported OECD averages (492, 498 and 500, respectively).



In 2006, among all participating countries, Australia was statistically significantly outperformed by:

- five countries for reading; an increase from 2003 when two countries outperformed Australia. In 2006 the two top-performing countries were Korea and Finland
- eight countries for mathematics; seven countries outperformed Australia in 2003. In 2006 the two top-performing countries were Chinese Taipei and Finland
- three countries for science (Finland, Hong Kong–China and Canada); in 2003 the comparable number was four countries (Thomson & De Bortoli 2008).

While Australia generally performs well, some groups of Australian students performed more poorly. The 2006 PISA results showed a wide gap in academic achievement between Australia's Indigenous and non-Indigenous students, with very little improvement since PISA was first conducted in 2000. In 2006, the average performance of Australia's Indigenous students placed them two and a half years behind Australia's non-Indigenous students (Thomson & De Bortoli 2008).

## 17 Social and emotional development

The consequences of poor social and emotional development include poor academic performance, persistent physical aggression, mental health issues, adolescent delinquency and antisocial behaviour.

No national data are currently available on social and emotional development due to definition and measurement difficulties.

A child's ability to learn and function as a contributing member of society is influenced by their social and emotional development. Social and emotional development encompasses a number of skills that children need to develop in order to succeed at school, and in life in general. These include the ability to identify and understand one's feelings, accurately read and comprehend emotional states in others, manage strong emotions and their expression, regulate one's behaviour, develop empathy for others, and establish and sustain relationships. These skills form the basis for self-regulation, enabling children to withstand impulses, maintain focus and undertake tasks regardless of competing interests (Boyd et al. 2005). Where social and emotional development is limited, this can result in poor academic performance, relationship problems, mental health issues, persistent physical aggression, adolescent delinquency and antisocial behaviour (Aviles et al. 2006; Boyd et al. 2005).

A child's social and emotional development is an interplay between biological and environmental factors (Vimpani et al. 2002). These factors can either increase the likelihood of poor developmental outcomes (referred to as 'risk factors') or strengthen a child's response to such risks (referred to as 'protective factors'). Examples of risk factors include disability, social isolation, domestic violence and substance abuse, while protective factors include a warm and supportive relationship between the child and parent or carer, and secure, stable care (Goldfeld 2007; Raising Children Network 2006a). Differences in social and emotional development may also result from a child's inborn temperament, cultural influences, behaviours modelled by adults, and the opportunities provided for social interaction (Raising Children Network 2006b).

The early childhood years are a crucial time for social and emotional development, as brain development in the first 5 years of life lays the foundations for cognition, behaviour, learning capacity, memory and coping skills. Many of the components of social and emotional development are similar to the concepts discussed in *Chapter 14 Transition to primary school*, which focuses on children entering school with the basic skills for life and learning, including social and emotional competence. However, social and emotional development is broader than this and continues throughout life—it is about gaining the strength and capacity to lead a full and productive life, and having the resilience to deal with change and unpredictability, a much broader concept than just successful transition to school.

### MEASURING SOCIAL AND EMOTIONAL DEVELOPMENT

As discussed, social and emotional development is determined by how well children can manage their feelings, understand others' feelings and interact positively with others. These concepts are difficult to measure in national surveys. Furthermore, as social and emotional development is a progressive process, measuring satisfactory development will depend on understanding what is normal achievement at a particular age.

**Key national indicator:** Under development

Given the difficulty in defining and measuring social and emotional development, there is currently no defined indicator, nor national-level data that describe the social and emotional development of Australian children.

The Australian Early Development Index (AEDI) collects information on two domains which are measures of social and emotional development: social competence and emotional maturity (see *Chapter 14 Transition to primary school* and *Appendix 2* for more information on the AEDI). Information is collected at school entry, as this is the first opportunity to collect information systematically on children. As the Australian Government has committed to the national implementation of the AEDI commencing in 2009, the AEDI could potentially address a social and emotional development indicator at the national level in the future.

The Growing up in Australia: the Longitudinal Study of Australian Children (LSAC) collects information on children's development across three domains—physical, social and emotional functioning, and learning—considered to be the major components of current wellbeing and future capability to be a successful participant in society (Wake et al. 2008; see *Appendix 2* for more information on the LSAC). The domain of interest here is the social and emotional functioning domain. The social-emotional outcomes measure in the LSAC includes social competence (pro-social behaviour and problems with peers), internalising (displaying negative emotional states such as nervousness, worry), and externalising (hyperactivity, problem behaviours when interacting with others). It is not possible to make claims about the performance of the overall sample of infants or children; furthermore, the LSAC sample is not truly nationally representative. For example, it has a greater proportion of post-secondary-educated mothers than in the national population. Consequently, the LSAC can not be used to address a national indicator.

### How does social and emotional development vary across population groups?

Although the LSAC can not be used to report on the indicator at the national level, it can be used for comparisons of subgroups of the sample relative to each other (see Wake et al. 2008:16). Statistically significant differences on the social and emotional functioning domain for the infant and child cohorts are discussed here—higher scores indicate better social-emotional outcomes.

On average, infants who lived in homes where a language other than English was spoken had lower scores than those in homes where only English was spoken (Wake et al. 2008).

More differences were found among the child cohort than the infant cohort. Among children aged 4–5 years, on average, scores were higher among girls, children whose mothers had higher education (tertiary and Year 12 completion), children whose parents had a higher occupational class and income, and children in the highest SES areas. Scores were lower on average among Indigenous children, children whose main language was not English and children in financially stressed households (Wake et al. 2008).

