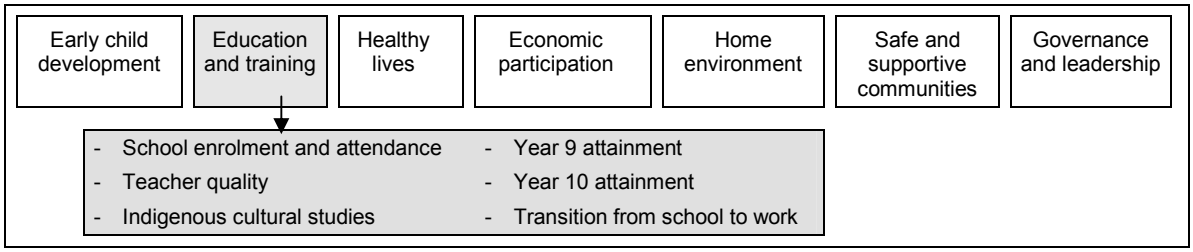
6 Education and training

Strategic areas for action



Education is a life-long activity, beginning with learning and development in the home through to the more formal settings of school education, vocational education and training (VET) and higher education. Education and training aims to develop the capacities and talents of students, so they have the necessary knowledge, understanding, skills and values for a productive and rewarding life. Actions in this strategic area can help strengthen communities and regions economically and socially through learning and employment, and there are strong links between higher levels of education and improved health outcomes.

Many COAG targets and headline indicators reflect the importance of education and training:

- early childhood education (section 4.3)
- reading, writing and numeracy (section 4.4)
- year 12 attainment (section 4.5)
- post-secondary education — participation and attainment (section 4.7).

Other COAG targets and headline indicators can be directly influenced by education and training outcomes:

- employment (section 4.6)
- household and individual income (section 4.9).

Outcomes in the education and training strategic area can be affected by outcomes in several other strategic areas for action, or can influence outcomes in other areas:

- early child development (basic skills for life and learning, hearing impediments) (chapter 5)
- healthy lives (access to primary health and fewer preventable hospitalisations will affect education outcomes, while education outcomes can influence tobacco consumption and harm, and obesity and nutrition) (chapter 7)
- economic participation (labour market participation, home ownership) (chapter 8)
- governance and leadership (governance capacity and skills) (chapter 11).

The indicators in this strategic area for action focus on the key factors that contribute to positive education and training outcomes, as well as measures of the outcomes themselves:

- school enrolment and attendance — there is a direct relationship between the number of days absent from school and academic performance. This section includes information on both enrolment and actual attendance (section 6.1)
- teacher quality — the quality of teaching is a key determinant of student learning outcomes. However, defining and measuring teacher quality is contentious. This section discusses research into the determinants of teacher quality, and identifies measures that might be reported once data become available (section 6.2)
- Indigenous cultural studies — culturally appropriate education for Indigenous students can contribute to good 'mainstream' academic outcomes, as well as consolidating community teachings and knowledge. It can also help preserve Indigenous languages. Indigenous cultural studies also provide an opportunity for Indigenous people to share their knowledge with the wider community. Approaches to incorporating Indigenous content into the school curriculum vary widely between education systems and between schools, and data for this indicator are very limited (section 6.3)
- Year 9 attainment — anecdotal evidence suggests that many Indigenous children are leaving school in years 9 and 10 with poor literacy and numeracy skills and with limited post-school options. This section supplements information about retention and participation rates with data on the proportion of people with year 9 as their highest level of schooling, and data on student performance in international testing programs (section 6.4)
- Year 10 attainment — year 10 generally signifies the end of compulsory schooling, and there is a significant drop off in Indigenous enrolments. This section supplements information about retention and participation rates with data on the proportion of people with year 10 as their highest level of schooling, by age groups (section 6.5)

- transition from school to work — the transition from school to work is a critical period. Young people who are not actively engaged in education and training, or employed, are at risk of long term disadvantage. This section reports on the number of 'at risk' 15 to 24 years olds (those neither employed nor studying), and employment outcomes for those with different levels of education (section 6.6).

Attachment tables

Attachment tables for this chapter are identified in references throughout this chapter by an 'A' suffix (for example, table 6A.1.1. These tables can be found on the Review web page (www.pc.gov.au/gsp), or users can contact the Secretariat directly.

6.1 School enrolment and attendance

Box 6.1.1 **Key messages**

- Attendance rates in government schools for years 1–10 were lower for Indigenous students than non-Indigenous students, in all states and territories in 2007 (figure 6.1.1).
- Attendance rates in government schools declined from year 1 to year 10 for both Indigenous and non-Indigenous students in 2007. The decline was generally greater for Indigenous students (between 2 and 14 percentage points) than non-Indigenous students (between 3 and 7 percentage points) (figure 6.1.1).

COAG has identified student attendance as one of the performance indicators to measure progress against the Closing the Gap target of halving the gap for Indigenous students in year 12 attainment or equivalent attainment rates by 2020. This indicator reports student attendance rates for students in years 1–10. Supplementary material on student enrolment rates provides contextual information.

Studies have found that Australia's Indigenous children have lower school enrolment rates and lower school attendance rates than non-Indigenous children (UNICEF Innocenti Research Centre 2004; Schwab and Sutherland 2004; Taylor 2004). Further, Indigenous school children are less likely to have parental support, for example, help with homework, compared with non-Indigenous children (UNICEF Innocenti Research Centre 2004).

Comparable attendance data for school students in years 1–10 were available for the first time for this report. However, student attendance data are based on enrolments and do not provide an indication of student attendance for those children not enrolled.

This section also presents data on student enrolments rates (based on enrolments by age compared to the equivalent projected age cohort in the population). These rates indicate whether there are children in the community who are not enrolled at school. However, they do not reflect whether a child actually attends school on a daily basis.

Student attendance

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). This survey also found that attendance of Aboriginal students was well below that of non-Aboriginal students.

During 2006, the Australian Government trialled a scheme in Hall's Creek in WA that docked welfare payments for parents if their children were regularly absent from school. The trial was stopped due to concerns about whether this approach was legal (DEWR 2006). In evaluating the trial, DEWR found three main contributing factors to low school attendance:

- lack of parental insistence that children go to school in the morning
- teacher quality
- bullying and teasing (DEWR 2006).

More recent programs linking receipt of welfare payments to children's attendance at school include the NT Emergency Response and the Cape York Welfare Reform project, both of which contain provisions for managing welfare payments of parents whose children do not attend school regularly. More information on these programs is included in sections 8.4 and 11.1.

Analysis of the 2002 National Aboriginal and Torres Strait Islander Social Survey by Hunter (2007) found that arrest of Indigenous youth is strongly associated with low school attendance rates for 13 to 17 year olds. Having been arrested in the last five years is associated with a reduction in attendance at school by around 25 percentage points.

Some remote Indigenous communities have introduced 'no school no pool' policies to encourage children to attend school. Those who do not attend school are not

allowed to use the swimming pool. Section 5.7 includes more information on swimming pools in remote communities.

An example of an initiative that has been found to increase attendance for Indigenous children at school is outlined in box 6.1.2.

Box 6.1.2 **'Things that work' — increasing school attendance**

The **Alice Springs Football Academy (Clontarf Foundation) Program** (NT) (originally launched in WA in 2000) was set up in three middle schools in Alice Springs in March 2007 (Anzac High School, Yirara College and Alice Springs High School) (Clontarf Foundation, 2007). Members of an academy (young Indigenous males between the ages of 13 and 18 years) are provided with high quality coaching, specialist physical conditioning, health education and mentoring in life skills, while the school caters for their educational needs. In order to remain in an academy, participants must consistently endeavour to:

- attend school regularly
- apply themselves to the study of appropriate courses
- embrace the academy's requirements for behaviour and self discipline.

Henderson (NT Chief Minister) 2009 stated that with the introduction of the Clontarf program, average attendance rates for the Alice Springs schools increased from 70 per cent in 2007 to 87 per cent in 2008 (Government media release).

During 2008, academies were also established Palmerston, Katherine and the Tiwi Islands (in the NT).

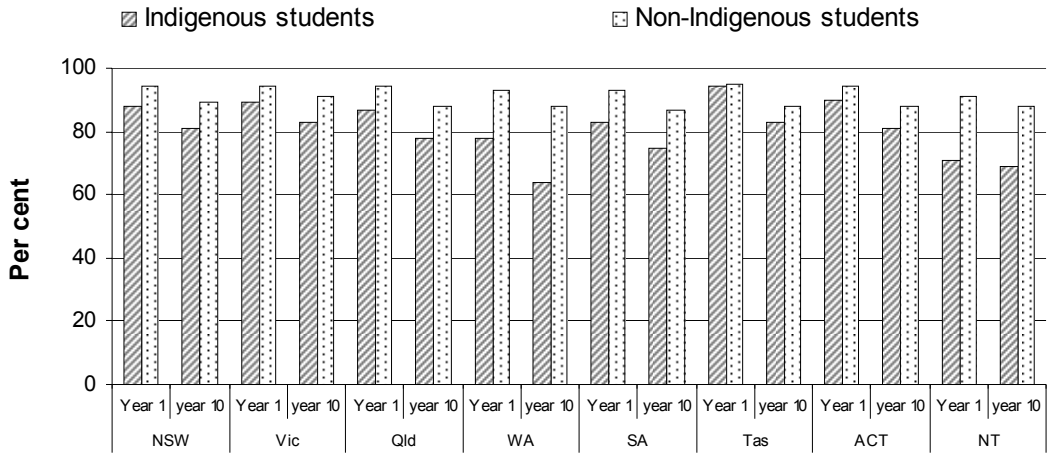
The **Community Festivals for Education Engagement** program (an Australian Government initiative) targets events that encouraged students, particularly Aboriginal and Torres Strait Islander students, to attend school and lead healthy lifestyles. In 2008, five organisations signed to fund 15 festivals around Australia, eight more than 2007. These organisations included Music Outback Foundation; Broome Aboriginal Media Association; Wakakirri Limited; TAFE NSW and Vibe Australia. Festivals were held at Yuendumu, Laramba, Tanami, and Alice Springs in the NT; Kalgoorlie and Broome in WA; Rockhampton, Bloomfield and Cunnamulla in Queensland; Coonamble, Lismore, Coffs Harbour and Taree in NSW; Port Augusta in SA and Mildura in Victoria. Students were able to participate in concerts and cultural activities that endorsed education, health, culture and potential vocational pathways.

Data on student attendance (in addition to enrolments) were first collected in 2007 through the MCEETYA national student attendance collection, and are the most recent data available for this report. Student attendance is defined as the number of actual full time equivalent student days attended over the collection period as a percentage of the total number of possible student days (see SCRGSP 2009, p. 4.20 for more details on the scope and definitions for this indicator).

In Australia in 2007, school attendance was compulsory for people between 6 and 15 years of age with the following variations:

- to 16 years of age in SA
- to 16 years of age or completing year 10 in Queensland
- from 5 to 16 years of age in Tasmania
- from the beginning of the year in which the child reaches 6 years and 6 months, to the end of the year in which the student turns 16 years of age in WA.

Figure 6.1.1 **Student attendance in government schools, by Indigenous status, by selected year levels, 2007[a]**



a See table 6A.1.1 for detailed explanatory notes on data.

Source: MCEETYA (2009) *2007 National Report on Schooling in Australia: Participation, attainment and attendance chapter*; table 6A.1.1.

Figure 6.1.1 presents data on student attendance rates for government schools in 2007.

- Attendance rates for Indigenous students were lower than for non-Indigenous students for years 1–10 in all states and territories (table 6A.1.1)
- Attendance rates declined from year 1 to year 10 for both Indigenous and non-Indigenous students (figure 6.1.1)
- The extent of decline in attendance from year 1 to year 10 was greater for Indigenous students (between 2 and 14 percentage points), compared to non-Indigenous students (between 3 and 7 percentage points) — with the exception of the NT where the decline was 2 percentage points for Indigenous students and 3 percentage points for non-Indigenous students (figure 6.1.1 and table 6A.1.1).

Data on student attendance rates were also available for Catholic schools and independent schools for 2007 (tables 6A.1.2-3). In summary:

- Attendance rates for Indigenous students were generally lower than for non-Indigenous students for years 1–10 across most states and territories
- Attendance rates were variable for Indigenous students from year 1 to year 10 with increases in some jurisdictions and decreases in other jurisdictions, however, for non-Indigenous students the rates were relatively stable.

Student enrolments

The number of children enrolled in primary school in 2008 was sourced from the MCEETYA National Schools Statistics Collection (NSSC). The NSSC considered students enrolled in year one minus one (prep, or pre-year one) to be in primary school.

School enrolment rates are based on enrolment numbers and do not measure whether enrolled children attend school. Enrolment rates have been derived by dividing the number of children enrolled at school with the population estimate for that age group. The most recent data on Indigenous population estimates are for 30 June 2006 (based on the 2006 ABS Census of Population and Housing). The Indigenous population projections based on the 2001 ABS Census of Population and Housing are considered too unreliable for use (revised Indigenous population projections based on the 2006 ABS Census were not available for this report).

Data on student enrolment rates should be interpreted with caution because of the Indigenous undercount in the Census. For example, most rates calculated for WA are greater than 100 per cent.

Nationally in 2006, the school enrolment rate was slightly lower for Indigenous and non-Indigenous children in the 5–9 year age group (90.2 per cent and 93.9 per cent respectively), than for the 10–14 year age group (93.3 per cent and 98.9 per cent respectively) (table 6A.1.4). However, the difference between Indigenous and non-Indigenous enrolment rates was slightly less for the 5–9 year age group (3.7 percentage points), compared to the 10–14 year age group (5.6 percentage points).

Enrolments data are also available by individual year of age for 2006, 2007 and 2008 (tables 6A.1.5–7). However, appropriate population data are not available for 2007 and 2008, therefore enrolment rates are unable to be provided for these years.

6.2 Teacher quality

Box 3.4.1 **Key message**

- Teacher quality is important for improving Indigenous student outcomes. COAG has agreed to a National Partnership on Improving Teacher Quality, but no data were available for this report.

Defining and measuring teacher quality has been made a priority under the Council of Australian Governments (COAG) National Education Agreement (COAG 2009a). As part of COAG's wider strategy to close the gap in educational outcomes between Indigenous and non-Indigenous students, the National Partnership Agreement (NP) on Improving Teacher Quality targets a series of reforms aimed at improving teacher and school leader quality for all students, and in particular, for students in disadvantaged Indigenous, rural/remote and hard to staff schools (COAG 2009b).

Evidence presented in other sections of this report shows that Indigenous students underperform relative to non-Indigenous students on a range of measures. In 2008, the proportion of Indigenous year 3, 5, 7 and 9 students who did not achieve the national minimum standard for reading, writing and numeracy was substantially higher than was the proportion of all students (section 4.4). This gap in learning outcomes between Indigenous students and all students increased as the degree of remoteness increased (section 4.4). A higher proportion of Indigenous students complete schooling only to year 9 or year 10 than non-Indigenous students (sections 6.4 and 6.5). Indigenous students are much less likely to leave school with a year 12 certificate compared with non-Indigenous students (section 4.5).

Student outcomes are determined by a number of factors including family background, school resourcing, class size, and student motivation and ability. An additional determinant of student learning outcomes is the quality of classroom teaching (OECD 2005; Dinham, Ingvarson and Kleinhenz 2008). How teacher quality is defined and measured is a contentious area of research with differing approaches. Generally, research indicates that teacher quality depends not only on the quality of the people in the teaching profession, but also their initial teacher education, their continuing professional development, and their work practices and working environment (OECD 2005).

Research indicates there are large differences in the quality of school teachers and that this variation has a significant impact on student achievement (Rockoff 2004, Rivkin, Hanushek and Kain 2005). The academic literature points to a number of teacher characteristics which may explain the variation in teacher quality. The

academic aptitude of a teacher — taken as the literacy and numeracy performance of teachers whilst they were studying — is a strong predictor of student learning outcomes (Leigh 2007a; Leigh and Ryan 2006; OECD 2005). Research suggests there has been a decline in the academic aptitude of Australian teachers between 1983 and 2003, as measured by school literacy and numeracy test results (Leigh and Ryan 2006).

At secondary school level, evidence indicates that traditional measures of teacher quality, such as years of teaching experience and the level of a teacher's tertiary qualification (bachelors or masters) are not significant predictors of student achievement. Teachers studying at university level the subjects they teach, and receiving training in how to teach, were more important factors in improving student grades (Monk 1994; Goldhaber and Brewer 1997; Wenglinsky 2002). Being taught by a teacher with a sound knowledge of the subject matter, particularly at the secondary level, is a strong predictor of student performance (Wayne and Youngs 2003; Goldhaber and Brewer 2002; Hill, Rowan and Loewenberg Ball 2005). The Senate Standing Committee on Employment, Workplace Relations and Education (2007) noted research finding that maths and science teachers with degrees in these disciplines had students who achieved higher results.

There is recognition that a high quality of initial teacher education is necessary, but not sufficient, for ongoing teacher effectiveness (OECD 2004). Ongoing professional development is important for teachers, particularly with teaching increasingly being seen in the context of providing 'lifelong learning'. Continual professional learning is the central means for capacity building in the teaching profession (Dinham, Ingvarson and Kleinhenz 2008). Other research indicates that students taught by new teachers underperform compared to students taught by more experienced teachers, with the gains from additional classroom experience peaking after several years. Retaining new teachers in the profession to ensure they gain classroom experience improves teacher quality and improves student outcomes (Rivkin, Hanushek and Kain 2005, Leigh 2007b).

An alternative to the input approach of identifying the characteristics of quality teachers would be to measure the effect a teacher has on student outcomes (for example, grades.). However, the NP on Improving Teacher Quality focuses on outcomes and outputs (COAG 2009c). Therefore, this report does not explore output and outcome measures of teacher quality.

Measures of teacher quality and future data sources

COAG has identified two broad measures of teacher quality:

- teacher and school leader quality at Indigenous schools
- the numbers of high quality teachers and school leaders attracted to and retained in Indigenous schools.

Few or no data are currently available for these measures. The Teacher Quality NP includes reforms to improve the quality and availability of teacher workforce data by undertaking a Longitudinal Teacher Workforce Study. Data will also become available from the national reporting by states and territories under national partnership processes. These data sources, as well as other data collected under additional reforms, should allow the measures to be reported on in future years.

The Teacher Quality NP states that Commonwealth, State and Territory governments will share responsibility for ensuring that non-government school authorities participate appropriately in teacher quality reforms (COAG 2009b). This is an important issue for states and territories with significant numbers of Indigenous students in non-government schools. For example, in the NT, in 2007, 18.1 per cent of Indigenous students attended non-government schools (SCRGSP 2009, table 4A.22). Further work is required on how to define and identify Indigenous and non-Indigenous schools.

6.3 Indigenous cultural studies

Box 6.3.1 **Key message**

- Many schools have introduced Indigenous language, culture and history programs to improve education outcomes for Indigenous students and to improve all students' knowledge and appreciation of Indigenous peoples and cultures.

In consultations on the 2007 report (SCRGSP 2007), differing views on the Indigenous cultural studies indicator were expressed by various Indigenous groups, governments and agencies. Some Indigenous organisations and communities were concerned that the attention was on culturally appropriate education for Indigenous people rather than good academic outcomes that are comparable to all students. Other Indigenous groups considered that cultural studies consolidated community teaching and could assist in preserving Indigenous language. Indigenous cultural studies also provide an opportunity for Indigenous people to share their knowledge

with the wider community and help overcome ignorance and misunderstanding that may lead to racism and discrimination.

Approaches to incorporating Indigenous content into curriculum vary between education systems and between schools. Schools exist in varied contexts and have varying numbers of Indigenous students. A quarter of schools had no Indigenous students in 2007 (22.8 per cent) and the remainder had some Indigenous students enrolled (48.0 per cent of schools had 0.1 to 5.0 per cent Indigenous students). In 2.0 per cent of schools, more than 95 per cent of students were Indigenous and in 1.1 per cent of schools all students were Indigenous (DEEWR unpublished).

Data for reporting against this indicator are very limited. The *National Report to Parliament on Indigenous Education and Training, 2006* (DEEWR 2008b) provides some relevant qualitative and quantitative information.

The Department of Education, Employment and Workplace Relations (DEEWR) also collects limited information related to this indicator from Indigenous Education Strategic Initiatives Programme (IESIP) reports completed by individual education systems and schools. A suite of performance indicators was developed for the Indigenous Education Program (2005–2008) — Supplementary Recurrent Assistance — and DEEWR plans to include a measure in this reporting process to encourage more extensive Indigenous involvement in developing and delivering Indigenous studies.

Culturally inclusive curricula

Many states and territories have implemented strategies to ensure Indigenous perspectives are incorporated into school curriculum and programs. DEEWR (2008a) reported that in 2006 over 16 000 Indigenous students and 13 000 non-Indigenous students located in 260 Australian schools were involved in an Indigenous language program. Most participating students attended government schools located in the NT, WA, NSW and SA.

The following case studies (box 6.3.2) illustrate how some schools and education providers are including Indigenous culture and perspectives into their curricula. Some case studies demonstrate programs created primarily for Indigenous students to increase their knowledge of their own culture and to improve their motivation to attend and succeed at school. Other case studies aim to improve the knowledge and understanding of all students (both Indigenous and non-Indigenous).

Box 6.3.2 **Things that work— Indigenous Cultural Studies**

The **'Dare to Lead'** Program at the Bendigo Senior Secondary College was included in the 2007 report. The program continued successfully across the nation in 2008, and is currently in its third phase, with over 53 per cent of all Australian schools participating. In 2008, as part of the Dare to Lead program, six Indigenous students from Djarragun College in far north Queensland, accompanied by school staff and representatives from the Dare to Lead program, visited the United Arab Emirates to showcase Aboriginal and Torres Strait Islander culture (APCAPDC 2008).

The **Broulee Public School** in Eurobodalla, NSW was included in the 2007 report. The Dhurga Djamanji language program has been strongly embedded into Broulee Public School's Human Society and its Environment curriculum. It is now being taught concurrently with other subject topics on a two year cycle. Broulee Public School has maintained a strong community partnership with the local Aboriginal community which underpins the sustainability of the program (NSW Government, unpublished).

Specialist language training to teach NSW Aboriginal languages in NSW public schools is being provided by the NSW Department of Education and Training's Aboriginal Education and Training Directorate, in collaboration with the University of Sydney's Koori Centre. In 2008 the Department provided sponsorship to two teachers undertaking the Masters of Indigenous Languages Education (NSW Government, unpublished).

A **Stage 4 Aboriginal language program** was in place in 10 NSW schools in 2008, including Nambucca Heads High School, Vincentia High School, Bourke High School, Parkes High School, Tamworth High School, Bonalbo Central School, Bowraville Central School, Chifley College Dunheved Campus, Bellingen High School and Shoalhaven High School. In many of these schools, the program means that the local Indigenous language can be studied to meet the mandatory language requirement for the School Certificate. The implementation of the Aboriginal languages K–10 syllabus, the increasing numbers of qualified teachers of Aboriginal languages and the regular professional development opportunities offered to all members of Aboriginal languages teams, has facilitated this development (NSW Government, unpublished).

(Continued next page)

Box 6.3.2 (continued)

The **Teacher Education Scholarship Program** encourages and supports Aboriginal people to become secondary or primary teachers in NSW public schools. The graduates are appointed as permanent teachers following successful completion of all university requirements of the teacher education program and fulfilling the Department's recruitment requirements. From 2002, the Department awarded 30 scholarships each year, with this number doubling to at least 60 scholarships annually from 2006. Currently, 201 Aboriginal scholarship holders are undertaking teacher training and a further 61 scholarships have been offered in 2009 (NSW Government, unpublished).

The Connecting with Country, Culture and Community program in Tasmania engages Indigenous students with their culture through meaningful and relevant cultural learning experiences as part of their academic schooling. Support materials based on the cultural activities undertaken by the students involved in the program have been developed to assist teachers integrate Aboriginal perspectives into the curriculum. These include DVDs, learning sequences, puzzles and booklets (Tasmanian Government, unpublished).

The Tasmanian Aboriginal Sharers of Knowledge Program (ASK) equips teachers and students with awareness and understanding of Tasmanian Aboriginal peoples and their cultures from an historical and contemporary perspective. The ASK Program provides cross cultural training for teaching and education staff and provides professional development and curriculum planning.

The Program provides schools with Indigenous artists; a selection of accredited Indigenous Cultural Ambassadors; access to Indigenous resources and tools of learning and a wide spectrum of cultural experiences in a variety of learning environments (Tasmanian Government, unpublished).

Indigenous employment in schools

While no specific data are available on Indigenous teachers teaching Indigenous studies, some data on Indigenous employment in schools have been included to provide information on Indigenous involvement in school education. Indigenous cultural perspectives are important across the curriculum and the presence of Indigenous staff provides positive role models and contributes to bringing Indigenous perspectives to students.

Table 6.3.1 **Indigenous employment in schools**

	2003	*2004*	*2005*	*2006*	*2007*
Government schools					
Number of Indigenous teachers[a, b]	1 473	1 493	1 459	1 649	1 691
Indigenous teachers as a proportion of all teachers (%)[a, b]	0.8	0.8	0.9	1.0	1.0
Indigenous students as a proportion of all students (%)	4.9	5.1	5.2	5.4	5.6
Number of AIEWs in schools[a, b, c]	1 435	1 459	1 570	1 745	1 649
Ratio of Indigenous students to Indigenous teachers and AIEWs[a, b]	37.9	38.6	38.8	35.8	38.1
Number of Indigenous staff in schools[a, b, d]	3 507	3 618	3 924	4 395	4 627
Total number of staff in schools[d]	232 545	236 869	235 037	238 891	249 615
Indigenous staff as a proportion of all staff in schools (%)[a, b]	1.5	1.5	1.7	1.8	1.9
Indigenous administrative and clerical staff as a proportion of all administrative and clerical staff (%)	4.8	5.0	4.0	4.1	4.1
Catholic schools[e]					
Number of Indigenous teachers[a, b]	72	*73*	106	110	126
Indigenous teachers as a proportion of all teachers (%)[a, b]	0.2	0.2	0.2	0.2	0.3
Indigenous students as a proportion of all students (%)[f]	1.5	1.6	1.7	1.7	2.0
Number of AIEWs in schools[a, b, c]	495	523	461	463	407
Ratio of Indigenous students to Indigenous teachers and AIEWs[a, b, f]	27.8	27.6	18.7	19.3	23.4
Number of Indigenous staff in schools[a, b, d]	552	562	548	608	613
Total number of staff in schools[d]	63 186	64 886	64 205	68 978	67 652
Indigenous staff as a proportion of all staff in schools (%)[a, b]	0.9	0.9	0.9	0.9	0.9
Indigenous administrative and clerical staff as a proportion of all administrative and clerical staff (%)	2.7	2.6	3.2	3.5	3.4

AIEWs = Aboriginal and Islander Education Workers. [a] For some states and territories, these data are based on actual numbers and for some others, it is based on full time equivalent (FTE). [b] Figures are not to be considered as nationally reflective because not all states and territories reported on employment in any one year. [c] Includes school and non school based AIEWs. [d] Includes teachers, specialist support staff (including teacher aides and AIEWs), administrative and clerical staff. [e] The number of Indigenous students in Catholic schools is based on the number in all Catholic schools, not just IESIP funded Catholic systems. Staff numbers are those in IESIP funded Catholic systems. [f] Catholic schools' enrolment data include some other non-government schools, including many Indigenous run schools that have greatly influenced the results.

Source: DEST IESIP performance reports 2003–2007 (unpublished).

In 2000, the Ministerial Council on Education, Employment, Training and Youth Affairs agreed to include an Indigenous identifier for staff in the National Schools Statistics Collection (NSSC). In 2006, the decision to use the ABS standard definition for the collection and reporting on Indigenous staffing was implemented

and became part of the NSSC reporting requirements. No data are yet available from the NSSC.

A general indication of the number of Indigenous teachers and Aboriginal and Islander education workers is available from DEEWR IESIP reports:

- Between 2003 and 2007 there have been increases in the number of Indigenous teachers and other staff in schools (table 6.3.1) but Indigenous teachers and staff in schools continue to be a much smaller proportion of all teachers and staff than Indigenous students are of all students (table 6.3.1).
- The number of Aboriginal and Islander Education Workers (AIEWs) employed in the government system and the Catholic system fluctuated between 2003 and 2007 (table 6.3.1).
- The ratio of Indigenous students to Indigenous teachers and AIEWs increased from 36.4 in 2001 to 38.1 in 2007, indicating that numbers of Indigenous students rose faster than numbers of Indigenous teachers and AIEWs (table 6A.3.1).

Table 6A.3.2 shows that 49.7 per cent of AIEWs in government schools and 86.0 per cent of AIEWs in Catholic schools had completed or were studying towards formal qualifications in 2007. The proportion who had completed or were studying towards formal qualifications has increased in government schools and Catholic schools since 2001 (31.3 per cent and 47.1 per cent, respectively).[1]

6.4 Year 9 attainment

Box 6.4.1 **Key messages**

- Much higher proportions of Indigenous than non-Indigenous people aged 15 years and older reported year 9 or below as their highest level of schooling in every age group in 2006 (figure 6.4.1).
- A higher proportion of Indigenous students than non-Indigenous students did not achieve the minimum proficiency level in international tests for science, mathematics and reading literacy (tables 6.4.2–6).

Evidence suggests that many Indigenous children are leaving school in years 9 and 10 with poor literacy and numeracy skills and with limited post school options.

[1] Smaller numbers of AIEWs in Catholic systems can mean that small changes in numbers studying or total AIEWs can cause proportions to vary from year to year without necessarily indicating a trend.

Early school leaving is associated with poor employment and income in later life. In 2006, Indigenous people who had completed schooling only to year 9 or below were less likely to be employed than those who went on to attain a year 12 certificate (31.3 per cent and 68.2 per cent, respectively) (table 4A.5.19). A much higher proportion of Indigenous people who only attained year 9 were found in the lowest income quintile, compared to Indigenous people who went on to complete year 12 (55.5 per cent compared 22.7 per cent) (table 4A.5.19).

There is evidence to suggest that the causes of early school leaving include:

- poor literacy and numeracy skills
- lack of student engagement in learning
- poverty
- the quality of teaching staff (ACER 2002; Purdie and Corrigan 2004).

More recent research emphasises that academically weaker students are far more likely to leave school early to enter the labour market or participate in post-school education. Other significant factors associated with early school leaving include the socioeconomic background of the students, coming from non-metropolitan areas, and students living in non-traditional families (Marks 2007).

The Western Australian Aboriginal Child Health Survey conducted in 2001 and 2002 (Zubrick et al. 2006) found that when the period of compulsory education ends the proportion of Indigenous children who no longer attend school is substantially higher than that for non-Indigenous children. Of those Indigenous children who left school soon after the period of compulsory education one-third were neither working nor undertaking any form of education. Section 6.6 provides more information on the transition from school to work.

Some programs that have been successful in encouraging Indigenous students to stay at school can be found in section 4.5, box 4.5.2.

To give a comprehensive picture of Indigenous year 9 attainment, this section presents:

- student enrolment rates for 10–14 year olds
- apparent retention rates from years 7 or 8 to year 9
- year 9 or below as the highest level of schooling for people 15 years and older
- maths, science and reading test results as indicators of academic attainment.

Student enrolments

The number of children enrolled in secondary school in 2008 was obtained from the MCEETYA National Schools Statistics Collection (NSSC). School enrolment rates are based on enrolment numbers and do not measure whether enrolled children attend school. Information on methods for calculating enrolment rates and definitional issues are addressed in section 6.1.

Nationally in 2006, the school enrolment rate was slightly lower for Indigenous than non-Indigenous children aged 10–14 years (93.3 per cent and 98.9 per cent, respectively) (table 6A.1.4). High enrolment rates are to be expected in this age group because, in 2006, school education was compulsory in all states and territories for people between 6 and 15 years of age (extending to 16 years of age in SA and Tasmania).

Indigenous enrolment rates were significantly lower for those aged 15–19 years compared with children aged 10–14 years (93.3 per cent and 37.9 per cent, respectively). The difference between Indigenous and non-Indigenous enrolment rates was greater for the 15–19 year age group (13.8 percentage points), compared to the 10–14 year age group (5.6 percentage points) (table 6A.1.4).

Enrolments data are also available by single year of age for 2006, 2007 and 2008 (tables 6A.1.5–7). However, appropriate population data are not available for 2007 and 2008, therefore, enrolment rates are unable to be provided for these years.

Student retention

The available retention data for year 9 do not fully reflect the high rate of early school leaving amongst Indigenous students, because apparent retention rates are based on enrolment numbers, and high rates are to be expected because normal year level progression means students in year 9 are generally of an age at which school education is compulsory. Apparent retention rates do not reflect school attendance or whether the student completed the school year (because data are collected in August). Some information on methods for calculating retention rates and definitional issues are addressed in section 4.5.

Table 6.4.1 **Apparent retention rates of full time secondary students to year 9, all schools, 2008 (per cent)**[a, b, c, d, e]

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*ACT*	*NT*	*Aust*
Indigenous									
Male	98.3	98.4	98.7	97.4	103.0	101.3	110.0	91.1	98.0
Female	101.7	96.4	99.7	98.8	99.0	104.4	102.8	90.4	99.2
Total	100.0	97.5	99.2	98.0	101.0	102.9	106.6	90.8	98.6
Non-Indigenous									
Male	98.8	100.1	100.8	101.4	100.5	100.0	100.2	97.3	100.0
Female	99.8	101.7	101.6	102.0	100.8	100.0	99.4	100.5	100.9
Total	99.3	100.9	101.2	101.7	100.6	100.0	99.8	98.8	100.4

[a] The apparent retention rate is the percentage of full time students who continued to year 9 from respective cohort groups at the commencement of their secondary schooling (year 7/8). [b] Retention rates are affected by factors that vary across jurisdictions, so variations in apparent retention rates over time within jurisdictions may be more useful than comparisons across jurisdictions. Retention rates can exceed 100 per cent for a variety of reasons, including student transfers between jurisdictions after the base year. [c] The exclusion of part time students from standard apparent retention rate calculations has implications for the interpretation of results for all jurisdictions, but particularly for SA, Tasmania and the NT where there is a high proportion of part time students. [d] The small number of Indigenous students in some jurisdictions (the ACT and Tasmania) can result in large fluctuations in the apparent retention rates when disaggregated by gender. [e] Ungraded students are not included in the calculation of apparent retention rates. This exclusion has particular implications for the NT and as a result, Indigenous apparent retention rates may misrepresent the retention of students in secondary schooling in the NT.

Source: ABS (2009); table 4A.5.30.

High apparent retention rates from years 7 or 8 to year 9 are to be expected because normal year level progression means students in year 9 are generally of an age at which school education is compulsory. For a discussion on the interpretation of apparent retention rates refer to section 6.5.

In 2008:

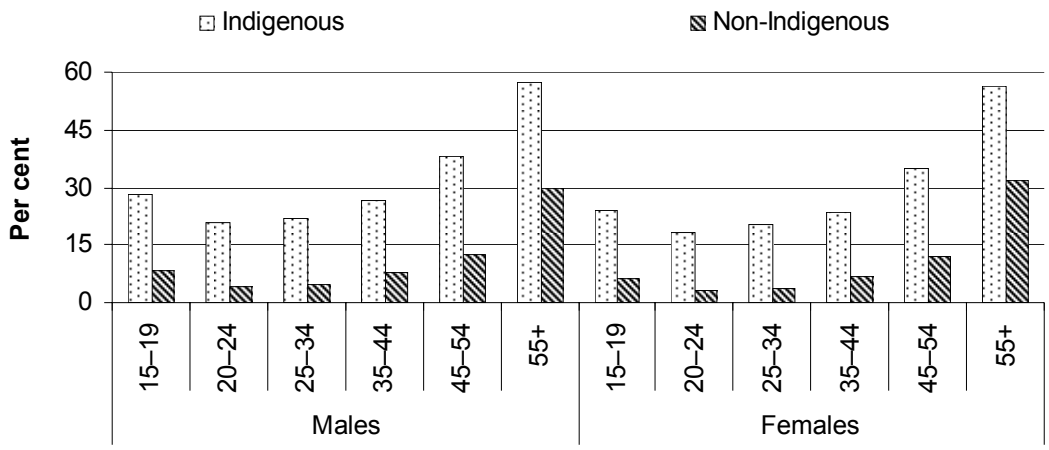
- nationally, the apparent retention rate from years 7 or 8 to year 9 for Indigenous students was 98.6 per cent compared with 100.4 per cent for non-Indigenous students (table 6.4.1)
- apparent retention rates from years 7 or 8 to year 9 for Indigenous students were higher than those for non-Indigenous students in NSW, SA, Tasmania and the ACT and lower than those for non-Indigenous students in Victoria, Queensland, WA and the NT (table 6.4.1).

Nationally, from 2002 to 2008 apparent retention rates from years 7 or 8 to year 9 for Indigenous students have remained relatively constant (table 4A.5.23).

Further data on apparent retention rates from 2002 to 2008 by jurisdiction and gender are included in tables 4A.5.24–30. For a comparison of apparent retention rates from years 7/8 to years 9, 10, 11 and 12 refer to section 4.5.

Highest level of schooling

Figure 6.4.1 **Year 9 or below as highest level of schooling by persons aged 15 years and over (excluding persons still attending secondary school), 2006[a, b]**



[a] The ABS 2006 Census questionnaire asked respondents for the highest level of schooling completed by persons aged 15 years and over (excluding persons still attending secondary school). [b] National totals are not included here as these data have not been age adjusted.

Source: ABS (unpublished), derived *from 2006 Census of Population and Housing*; table 4A.5.16.

Nationally, in 2006:

- the proportions of Indigenous males and females aged 15 years and older who had left school before completing Year 10 were much higher than the corresponding proportions of non-Indigenous males and females (figure 6.4.1).
- the same pattern was evident in all jurisdictions and remoteness areas (tables 4A.5.17 and 4A.5.18).

More data on completion to year 9 or below by jurisdiction and remoteness area are available in tables 4A.5.17 and 4A.5.18.

Internationally comparable learning outcomes

Australia participates in two international tests: the OECD Program for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS). Both tests report results for Indigenous and non-Indigenous students.

TIMSS focuses on the mathematics and science curriculum and reports learning outcomes data for year 4 and year 8 students. As an approximation of year 9

academic attainment, data for year 8 students for 2002-03 and 2006-07 are presented in this section. There is currently no nationally agreed proficiency level set for the TIMSS. This section reports on student attainment to the intermediate mathematics and science benchmarks. Detailed information about TIMSS is available at http://www.acer.edu.au/timss and tables 6A.4.1 and 2.

TIMSS and PISA tables in this section include 95 per cent confidence intervals in brackets. Confidence intervals are a standard way of expressing the degree of uncertainty associated with survey estimates. An estimate of 80 with a confidence interval of ± 2, for example, means that if another sample had been drawn, or if another combination of test items had been used, there is a 95 per cent chance that the result would lie between 78 and 82. The learning outcomes proportion for a given level can be thought of in terms of a range. If one outcome level ranges from 78–82 and another's from 77–81, then it is not possible to say with confidence that one differs from the other (because there is an overlap and there is unlikely to be a statistically significant difference). Where ranges do not overlap, there is a high likelihood that there is a statistically significant difference between the two estimates.

Table 6.4.2 Proportion of year 8 students reaching the international benchmarks for mathematics, by Indigenous status (TIMSS)[a, b]

	Indigenous students (%)	*Non-Indigenous students (%)*
2006-07		
Advanced benchmark	1.6 (± 2.6)	6.1 (± 2.6)
High benchmark	5.7 (± 4.1)	19.3 (± 2.5)
Intermediate benchmark	26.1 (± 9.6)	37.3 (± 2.7)
Low benchmark	29.3 (± 7.8)	27.5 (± 2.7)
Not at low benchmark	37.3 (± 10.2)	9.8 (± 1.7)
At or above the intermediate benchmark[b]	*33.0 (± 10.0)*	*63.0 (± 3.7)*
2002-03		
Advanced benchmark	0.5 (± 0.6)	7.0 (± 2.3)
High benchmark	7.8 (± 6.6)	23.4 (± 3.9)
Intermediate benchmark	24.5 (± 11.5)	36.3 (± 3.8)
Low benchmark	34.0 (± 9.9)	24.1 (± 3.6)
Not at low benchmark	33.4 (± 11.7)	9.3 (± 2.4)
At or above the intermediate benchmark[b]	*32.8 (± na)*	*66.7 (± na)*

a The TIMSS mathematics scale has four defined proficiency levels, from the advanced benchmark (the highest) to the low benchmark (the lowest) with an additional level referred to as 'Not at low benchmark' which covers those students who are unable to reach even the first threshold of the skills that TIMSS seeks to measure. **b** Students at the intermediate benchmark are able to recognise, apply and communicate basic mathematical and scientific knowledge in straightforward situations and across a range of topics. **na** not available.

Source: ACER (unpublished); table 6A.4.1.

In 2006-07, for year 8 mathematics, 33.0 per cent of Indigenous students attained the intermediate benchmark or above compared with 63.0 per cent of non-Indigenous students (table 6.4.2).

Between 2002-03 and 2006-07, for year 8 mathematics, the proportion of Indigenous students who attained the intermediate benchmark or above remained largely unchanged (32.8 per cent and 33.0 per cent). The proportion of non-Indigenous students attaining the intermediate benchmark or above decreased from 66.7 per cent to 63.0 per cent over the same period (table 6.4.2).

Table 6.4.3 Proportion of year 8 students reaching the international benchmarks for science, by Indigenous status (TIMSS)[a, b]

	Indigenous students (%)	*Non-Indigenous students (%)*
2006-07		
Advanced benchmark	1.6 (± 2.3)	8.8 (± 2.9)
High benchmark	12.2 (± 6.5)	26.1 (± 2.1)
Intermediate benchmark	23.4 (± 9.6)	37.0 (± 2.7)
Low benchmark	32.1 (± 8.5)	21.1 (± 2.7)
Not at low benchmark	30.8 (± 9.0)	6.9 (± 1.4)
At or above the intermediate benchmark[b]	37.0 (± 10.0)	72.0 (± 3.1)
2002-03		
Advanced benchmark	2.4 (± 4.0)	9.2 (± 2.3)
High benchmark	12.7 (± 7.1)	31.9 (± 3.1)
Intermediate benchmark	31.6 (± 10.2)	36.6 (± 2.6)
Low benchmark	32.7 (± 11.4)	17.4 (± 2.7)
Not at low benchmark	20.7 (± 11.9)	4.9 (± 1.5)
At or above the intermediate benchmark[b]	*46.7 (± na)*	*77.7 (± na)*

a The TIMSS science scale has four defined proficiency levels, from the advanced benchmark (the highest) to the low benchmark (the lowest) with an additional level referred to as 'Not at low benchmark' which covers those students who are unable to reach even the first threshold of the skills that TIMSS seeks to measure. **b** Students at the intermediate benchmark are able to recognise, apply and communicate basic mathematical and scientific knowledge in straightforward situations and across a range of topics. **na** not available.

Source: ACER (unpublished); table 6A.4.2.

In 2006-07, for year 8 science, 37.0 per cent of Indigenous students attained the intermediate benchmark or above compared with 72.0 per cent of non-Indigenous students (table 6.4.3).

Between 2002–03 and 2006–07, for year 8 science, the proportion of Indigenous students who attained the intermediate benchmark or above decreased from 46.7 per cent to 37.0 per cent. The proportion of non-Indigenous students attaining the intermediate benchmark or above also decreased from 77.7 per cent to 72.0 per cent (table 6.4.3).

The PISA provides learning outcomes data for 15 year olds in three core assessment domains: reading literacy, mathematical literacy and scientific literacy. The National Education Agreement set a nationally agreed proficiency level at level 3 on PISA reading literacy, PISA mathematical literacy and PISA scientific literacy assessments (COAG 2009). Level 3 or above can be described as a level of achievement that is reasonably challenging and which requires students to demonstrate more than minimal or elementary skills.

Care should be taken when making comparisons between the results across the three PISA cycles. Comparisons should only be made between a major and minor assessment domain once the domain has become the major assessment domain for the first time. For this section:

- Scientific literacy was the major assessment domain in PISA 2006. Therefore, scientific literacy data are presented only for 2006.
- Mathematical literacy was the major assessment domain in PISA 2003. Therefore, mathematical literacy data for 2003 and 2006 are presented.
- Reading literacy was the major assessment domain in PISA 2000. Therefore, reading literacy results from 2000, 2003 and 2006 are presented.

Detailed information about PISA 2006 is available in Thomson and Bortoli (2007) and OECD (2007).

Table 6.4.4 Proportion of 15 year old secondary students achieving each level of the overall science literacy scale (PISA)[a, b]

	Indigenous students (%)	*Non-Indigenous students (%)*
2006		
Level 6	0.4 (± 0.6)	2.9 (± 0.6)
Level 5	3.3 (± 2.4)	12.0 (± 1.0)
Level 4	11.6 (± 3.3)	25.0 (± 1.0)
Level 3	19.1 (± 3.9)	28.1 (± 1.0)
Level 2	26.2 (± 5.1)	20.0 (± 1.2)
Level 1	23.0 (± 5.9)	9.4 (± 0.8)
Below level 1	16.5 (± 5.9)	2.6 (± 0.4)
At or above level 3[b]	*34.3 (± 2.8)*	*68.0 (± 0.9)*

[a] The PISA science literacy scale has six defined proficiency levels, from level 6 (the highest) to level 1 (the lowest) with an additional level referred to as 'Below level 1' which covers those students who are unable to reach even the first threshold of the skills that PISA seeks to measure. The COAG National Education Agreement (COAG 2009) set a benchmark for the PISA as the proportion of students achieving at or above the nationally agreed proficiency level (level 3). [b] Level 3 or above can be described as a level of achievement that is reasonably challenging and which requires students to demonstrate more than minimal or elementary skills to be regarded as reaching it.

Source: ACER (unpublished); table 6A.4.3.

In 2006, for science literacy, 34.3 per cent of Indigenous 15 year olds achieved the national proficiency level (level 3) or above compared with 68.0 per cent of non-Indigenous students (table 6.4.4).

Table 6.4.5 **Proportion of 15 year old secondary students achieving each level of the overall mathematics literacy scale (PISA)[a, b]**

	Indigenous students (%)	*Non-Indigenous students (%)*
2006		
Level 6	0.5 (± 0.6)	4.4 (± 1.0)
Level 5	2.4 (± 1.6)	12.4 (± 1.0)
Level 4	9.7 (± 2.9)	23.6 (± 1.0)
Level 3	19.8 (± 3.7)	27.1 (± 1.2)
Level 2	28.5 (± 5.1)	20.3 (± 1.2)
Level 1	21.9 (± 5.1)	9.3 (± 0.8)
Below level 1	17.1 (± 6.5)	2.9 (± 0.4)
At or above level 3[b]	*32.4 (± 2.6)*	*67.5 (± 0.9)*
2003		
Level 6	0.9 (± 1.0)	5.9 (± 1.0)
Level 5	3.7 (± 1.8)	14.2 (± 1.0)
Level 4	8.4 (± 2.9)	23.6 (± 1.2)
Level 3	17.1 (± 3.9)	24.2 (± 1.4)
Level 2	26.8 (± 6.1)	18.4 (± 1.2)
Level 1	25.0 (± 10.2)	9.7 (± 1.0)
Below level 1	18.1 (± 7.4)	4.0 (± 0.8)
At or above level 3[b]	*30.1 (± 3.2)*	*67.9 (± 0.9)*

[a] The PISA mathematics literacy scale has six defined proficiency levels, from level 6 (the highest) to level 1 (the lowest) with an additional level referred to as 'Below level 1' which covers those students who are unable to reach even the first threshold of the skills that PISA seeks to measure. The COAG National Education Agreement (COAG 2009) set a benchmark for the PISA as the proportion of students achieving at or above the nationally agreed proficiency level (level 3). [b] Level 3 or above can be described as a level of achievement that is reasonably challenging and which requires students to demonstrate more than minimal or elementary skills to be regarded as reaching it.

Source: ACER (unpublished); table 6A.4.4.

In 2006, for mathematics literacy, 32.4 per cent of Indigenous 15 year olds achieved the national proficiency level (level 3) or above compared with 67.5 per cent of non-Indigenous students (table 6.4.5).

Between 2003 and 2006, for mathematics literacy, the proportion of Indigenous 15 year olds who attained the national proficiency level (level 3) or above, increased from 30.1 per cent to 32.4 per cent. The proportion of non-Indigenous 15 year olds attaining the national proficiency level (level 3) or above remained largely unchanged (changing from 67.9 per cent to 67.5 per cent) (table 6.4.5).

Table 6.4.6 **Proportion of 15 year old secondary students achieving each level of the overall reading literacy scale (PISA)[a, b]**

	Indigenous students (%)	*Non-Indigenous students (%)*
2006		
Level 5	3.3 (± 1.8)	10.8 (± 1.2)
Level 4	8.9 (± 2.7)	25.4 (± 1.4)
Level 3	21.3 (± 4.1)	30.3 (± 1.4)
Level 2	28.1 (± 6.5)	20.8 (± 1.4)
Level 1	22.5 (± 4.7)	9.2 (± 0.8)
Below level 1	15.9 (± 4.7)	3.4 (± 0.6)
At or above level 3[b]	*33.5 (± 2.5)*	*66.5 (± 0.9)*
2003		
Level 5	4.0 (± 2.2)	14.9 (± 1.4)
Level 4	11.5 (± 3.7)	27.3 (± 1.6)
Level 3	22.9 (± 6.9)	28.5 (± 1.6)
Level 2	23.6 (± 6.5)	18.2 (± 1.2)
Level 1	23.2 (± 10.6)	7.9 (± 0.8)
Below level 1	14.9 (± 9.4)	3.4 (± 0.6)
At or above level 3[b]	*38.4 (± 3.9)*	*70.6 (± 0.9)*
2000		
Level 5	4.2 (± 2.5)	17.4 (± 2.4)
Level 4	8.4 (± 3.9)	26.2 (± 2.2)
Level 3	25.6 (± 7.6)	26.2 (± 2.4)
Level 2	29.1 (± 7.4)	18.5 (± 1.8)
Level 1	20.1 (± 5.9)	8.8 (± 1.6)
Below level 1	12.7 (± 5.1)	2.9 (± 0.6)
At or above level 3[b]	*38.1 (± 3.4)*	*69.9 (± 1.3)*

[a] The PISA reading literacy scale has five defined proficiency levels, from level 5 (the highest) to level 1 (the lowest) with an additional level referred to as 'Below level 1' which covers those students who are unable to reach even the first threshold of the skills that PISA seeks to measure. The COAG National Education Agreement (COAG 2009) set a benchmark for the PISA as the proportion of students achieving at or above the nationally agreed proficiency level (level 3). [b] Level 3 or above can be described as a level of achievement that is reasonably challenging and which requires students to demonstrate more than minimal or elementary skills to be regarded as reaching it.

Source: ACER (unpublished); table 6A.4.5.

In 2006, for reading literacy, 33.5 per cent of Indigenous 15 year olds achieved the national proficiency level (level 3) or above compared with 66.5 per cent of non-Indigenous students (table 6.4.6).

Between 2000 and 2006, for reading literacy, the proportion of Indigenous 15 year olds who attained the national proficiency level (level 3) or above, decreased from 38.1 per cent to 33.5 per cent. The proportion of non-Indigenous 15 year olds attaining the national proficiency level (level 3) or above also declined from 69.9 per cent to 66.5 per cent (table 6.4.6).

6.5 Year 10 attainment

Box 6.5.1 **Key messages**

- The apparent retention rate from years 7 or 8 to year 10 for Indigenous students was 89.2 per cent compared with 99.8 per cent for non-Indigenous students in 2008 (table 6.5.1).
- The school enrolment rate was much lower for Indigenous 15–19 year olds (37.9 per cent) than for non-Indigenous people in that age group (51.7 per cent) in 2006 (table 6A.1.4). For both Indigenous and non-Indigenous people, enrolment rates declined as students exceeded the compulsory school age.

Attempts to increase Indigenous school attainment have been made a priority under the Council of Australian Governments (COAG) National Education Agreement (COAG 2009). In general, schooling in Australia is compulsory until 15 or 16 years of age, which equates to year 10. Section 6.4 examines the proportion of Indigenous people who did not complete compulsory schooling (that is, their highest level of schooling was year 9 or below.) This section examines the proportion of Indigenous people who reported year 10 or below as their highest level of schooling.

There is a strong correlation between the level of schooling attained and a person's employment prospects. In 2006, the employment rate of Indigenous people increased with the level of schooling they had attained. The employment rate of Indigenous people who had completed schooling only to year 8 or below was 26.5 per cent, while 52.8 per cent of Indigenous people who completed schooling to year 10 reported being employed. Of the Indigenous people who attained year 12, 68.2 per cent reported having a job (table 4A.5.19).

Household income also increases with the level of education attained. ABS 2006 Census data show that 59.1 per cent of Indigenous people who had completed schooling to year 8 or below were in the lowest income quintile. The corresponding proportions for Indigenous people who had completed schooling to years 10 and 12 were 37.8 per cent and 22.7 per cent, respectively (table 4A.5.19). Conversely, the proportions of Indigenous people who had completed schooling to year 8 or below, year 10 and year 12 who were in the highest income quintile, were 2.7 per cent, 7.3 per cent and 16.5 per cent, respectively (table 4A.5.19).

A body of evidence points to the benefits of continuing school after the period of compulsory schooling ends. (See sections 4.5 and 6.4).

To provide a comprehensive picture of Indigenous year 10 attainment, this section includes student enrolment rates for 15–19 year olds, and year 10 retention and

attainment data. Programs that have been successful in encouraging Indigenous students to stay at school can be found in section 4.5, box 4.5.2.

Student enrolments

The number of children enrolled in secondary school in 2008 was obtained from the MCEETYA National Schools Statistics Collection (NSSC). School enrolment rates are based on enrolment numbers and do not measure whether enrolled children attend school. Information on methods for calculating enrolment rates and definitional issues is provided in section 6.1.

Nationally in 2006, the school enrolment rate was much lower for Indigenous people than non-Indigenous people in the 15–19 year age group (37.9 per cent and 51.7 per cent, respectively) (table 6A.1.4). Table 6A.1.4 shows that for both Indigenous and non-Indigenous people, enrolment rates declined as students exceeded the compulsory school age.

Enrolment data are also available by single year of age for 2006, 2007 and 2008 (tables 6A.1.5–7). However, appropriate population data are not available for 2007 and 2008, therefore, enrolment rates are unable to be provided for these years.

Student retention

Information on methods for calculating retention rates and definitional issues are addressed in sections 4.5 and 6.4.

Table 6.5.1 **Apparent retention rates of full time secondary students to year 10, all schools, 2008 (per cent)**[a, b, c, d, e]

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*ACT*	*NT*	*Aust*
Indigenous									
Male	83.2	83.8	94.8	91.7	94.4	103.8	100.0	68.5	88.1
Female	86.1	80.5	96.9	95.1	97.0	103.6	65.4	76.0	90.3
Total	84.7	82.2	95.8	93.3	95.6	103.7	81.4	71.9	89.2
Non-Indigenous									
Male	97.5	97.5	101.2	102.2	101.5	99.9	100.6	97.3	99.2
Female	98.0	100.5	102.6	103.4	102.1	100.4	97.8	95.5	100.4
Total	97.8	99.0	101.9	102.8	101.8	100.1	99.2	96.3	99.8

a The apparent retention rate is the percentage of full time students who continued to year 10 from respective cohort groups at the commencement of their secondary schooling (year 7/8). See notes to table 4A.5.30 for more detail. Retention rates are affected by factors that vary across jurisdictions. For this reason, variations in apparent retention rates over time within jurisdictions may be more useful than comparisons across jurisdictions. Retention rates can exceed 100 per cent for a variety of reasons, including student transfers between jurisdictions after the base year. **b** The exclusion of part time students from standard apparent retention rate calculations has implications for the interpretation of results for all jurisdictions, but particularly for SA, Tasmania and the NT where there is high proportion of part time students. **c** Ungraded students are not included in the calculation of apparent retention rates. This exclusion has particular implications for the NT and as a result, Indigenous apparent retention rates may misrepresent the retention of students in secondary schooling in the NT.

Source: ABS (2009); table 4A.5.30.

Apparent retention rates from years 7 or 8 to year 10 are lower than from years 7 or 8 to year 9 because normal year level progression means students in year 10 are generally of an age at which school education is no longer compulsory. In 2008:

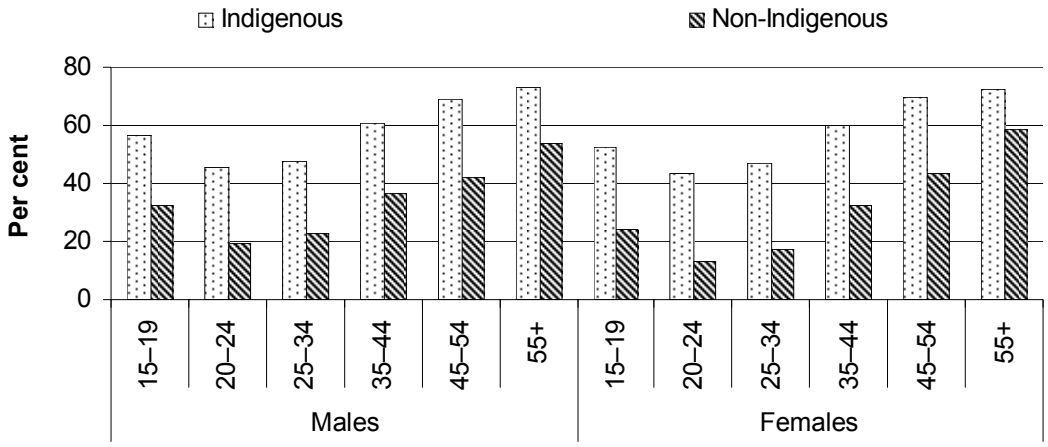
- nationally, the apparent retention rate from years 7 or 8 to year 10 for Indigenous students was 89.2 per cent compared with 99.8 per cent for non-Indigenous students (table 6.5.1)
- apparent retention rates from years 7 or 8 to year 10 for Indigenous students were lower in all State and Territories, except Tasmania, where it was higher (table 6.5.1).

Nationally, from 2002 to 2008 apparent retention rates from years 7 or 8 to year 10 for Indigenous and non-Indigenous students increased slightly (from 86.4 per cent to 89.2 per cent for Indigenous students and from 98.5 per cent to 99.8 per cent for non-Indigenous students) (table 4A.5.23).

Further data on apparent retention rates from 2002 to 2008 by jurisdiction and gender are included in tables 4A.5.24–30. For a comparison of apparent retention rates from years 7 or 8 to years 9, 10, 11 and 12 refer to section 4.5.

Highest level of schooling

Figure 6.5.1 **Year 10 or below as highest level of schooling for people aged 15 years and over (excluding people still attending secondary school), 2006[a, b]**



a The ABS 2006 Census questionnaire asked respondents for the highest level of schooling completed by people aged 15 years and over (excluding people still attending secondary school). **b** National totals are not included here as these data have not been age standardised.

Source: ABS (unpublished), derived *from 2006 Census of Population and Housing*; table 4A.5.16.

Nationally, in 2006:

- Indigenous males and females aged 15 years and older had higher rates of completion to year 10 or below than their non-Indigenous counterparts in every age group (figure 6.5.1)
- the same pattern was evident in all States and Territories and remoteness areas (tables 4A.5.17 and 4A.5.18).

6.6 Transition from school to work

Box 6.6.1 **Key messages**

- Indigenous people aged 15 to 24 years were more than three times as likely as non-Indigenous people to be neither employed nor studying in 2006 (29.1 and 9.0 per cent respectively) (figure 6.6.1).
- The proportion of Indigenous people aged 15 to 24 years who were neither employed nor studying decreased between 2001 and 2006. The gap between Indigenous and non-Indigenous people also decreased (from 20.3 to 16.7 percentage points for males, and from 26.7 to 23.6 percentage points for females) (figure 6.6.2).

This indicator reports on the status of young Indigenous people's participation in either the work force or the education/training system. Two approaches are used to examine the transition from education to work — the 'at risk' and the 'outcome from education' approaches. The 'at risk' approach examines the number of young Indigenous people who are neither participating in education and training nor employed. These people are considered as being at risk of long term disadvantage. The 'outcome from education' approach looks into labour force outcomes for Indigenous people, aged 18 years and over, who have achieved a certain level of education.

A study by McMillan and Marks (2003) found that young people who are not achieving well at secondary school and leave without a school qualification may have few opportunities for work. As time passes, their chances of gaining employment or re-entering full time education appear to decline even further.

Studies examining labour market outcomes of non-graduates and graduates from university or TAFE have concluded that the transition from study to work was generally smoother for graduates, and that tertiary qualifications worked to protect young people from many of the difficulties involved with making this transition (Lamb 2001; Lamb and McKenzie 2001). The authors also found that university and TAFE graduates earned significantly more than those who entered the workforce directly from school. Most students who moved into employment immediately after completing Year 12 were in low level positions, primarily in the areas of retail trades, accommodation, cafes and restaurants, and manufacturing (Thomson 2005).

Sections 4.5, 6.4 and 6.5 contain more information on secondary school retention for Indigenous students. Unemployment and labour force participation for Indigenous people aged 18 to 64 years are discussed in section 4.6. More

information related to employment undertaken by Indigenous people, including employment by full time and part time status, by sector, industry and skill level are examined in section 8.1. Self employment and Indigenous business are reported in section 8.2.

In this section, data are reported on:

- people, aged 15 to 24 years, who were neither participating in education and training nor employed
- labour force status of people, aged 25 to 64 years, who have, and have not, achieved a qualification of certificate level III or higher.

Box 6.6.2 provides examples of programs that aim to encourage Indigenous youth to complete year 12 and then progress to tertiary education or employment.

Box 6.6.2 'Things that work' — transition from school to work

Follow the Dream, run by the Western Australian Department of Education and Training, is designed to increase the number of Aboriginal students completing year 12 and gaining university entrance. The program targets high achieving Aboriginal students enrolled in years 6 to 12 and operates in 24 sites across WA. In 2008, 634 students from 57 schools participated.

A coordinator manages after-school learning centres at each site, where students are assisted by tutors. Coordinators promote effective learning strategies for the students, and help students develop support networks with tutors, school staff, parents, industry and universities. Program partners include the Department of Education, Employment and Workplace Relations, Edith Cowan University, the Graham (Polly) Farmer Foundation, and other corporate supporters.

Between 2004 and 2007, of the 179 participating students who completed year 12, 24 achieved direct university entry, 34 entered university bridging courses, 28 obtained entry to TAFE, 29 gained employment, 24 took up traineeships, 20 entered apprenticeships, and two students were successful in being admitted into the Indigenous Aerospace Initiative, a program that enables young Aboriginal people to train as commercial airline pilots (WA Department of Education and Training 2009).

The **Will and A Way** (NSW) program arose from a small research program in 2004 that looked at why Indigenous students were not transitioning from secondary school to local universities, despite the availability of appropriate courses designed specifically for Indigenous students. The study found that there were multiple barriers to Indigenous students completing year 12 successfully and gaining entry to university.

(Continued next page)

Box 6.6.2 (continued)

The Will and a Way program was developed to address the barriers and targets youth in years 10–12, both Indigenous and non-Indigenous, identified as 'at risk'. The program aims to keep these students at school, or otherwise help them into the workforce. The program provides individualised support and helps students find casual and full-time employment.

The program includes pledge ceremonies, where students in the program make an undertaking that by the following year they would be continuing with studies at school or in TAFE, participating in traineeship or apprenticeships or be in full-time work. 339 students have participated in the program to date, 237 of those students were Indigenous (Australian Government, unpublished).

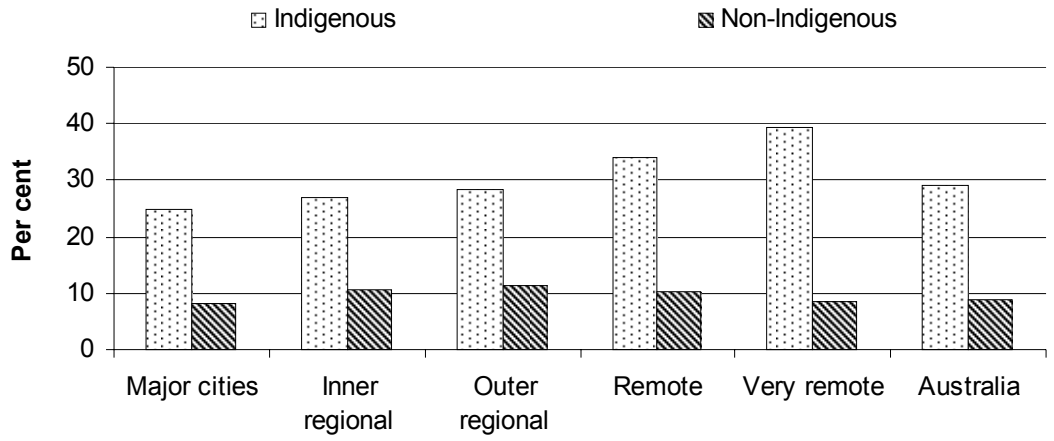
The 'at risk' approach

This approach looks at the participation in the work force and education system of people aged 15 to 24 years. It examines the proportion of people in this age group who are neither in full or part time employment, nor in full or part time study.

Young people who spend extended periods of time outside the work force and full time education may be missing out on employment experience, the development of work skills and familiarity with new technologies, all of which decrease their chances of finding employment in the future.

A research report based on the Longitudinal Surveys of Australian Youth (LSAY) found that over 64 per cent of the young people who participated in the LSAY spent some time outside the labour force and full time education over the years they were surveyed (from 1997 up to the end of 2003). For the majority of young people, the period of time spent outside the labour force and full time education was quite short, around one month. Young people who had not achieved highly at secondary school, did not have a year 12 certificate, were female, or who had a health problem or disability were more likely to report extended periods of time (longer than 12 months) outside the labour force and full time education (Hillman 2005).

Figure 6.6.1 **Proportion of people aged 15 to 24 years who were not employed and not studying, 2006[a, b]**



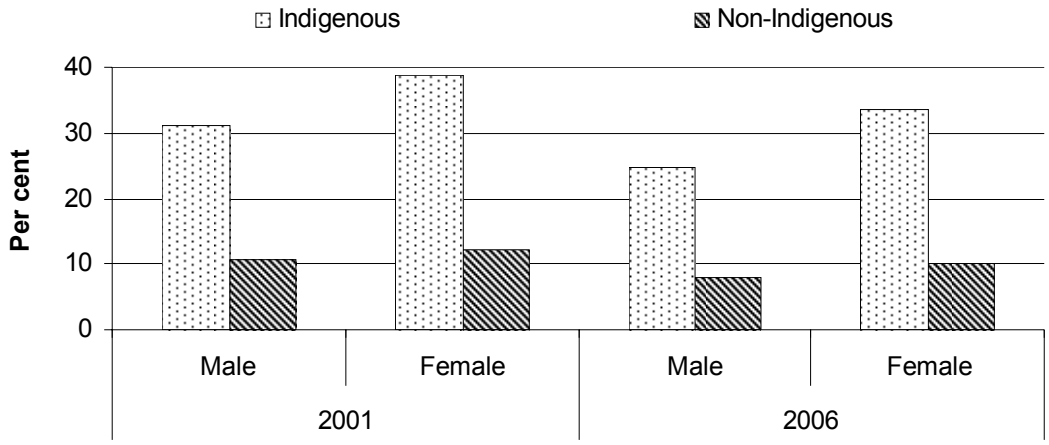
[a] Not employed comprises people unemployed or not in the labour force. Not in the labour force comprises people who are not employed or unemployed. Not in the labour force includes people who do not have a job and are not actively looking for work or not available to start work, are retired, pensioners and people engaged solely in home duties (ABS 2006). [b] CDEP participants were counted as employed in the 2006 Census (ABS 2006).

Source: ABS (unpublished), derived from *2006 Census of Population and Housing*; table 6A.6.2.

In 2006:

- nationally, Indigenous people aged 15 to 24 years were around three times as likely to be neither employed (unemployed or not in the labour force) nor studying as non-Indigenous people in the same age group (29.1 per cent compared with 9.0 per cent) (figure 6.6.1)
- the proportion of Indigenous people aged 15 to 24 years who were neither employed nor studying increased with remoteness. In very remote areas, 39.5 per cent of Indigenous people aged 15 to 24 years were neither employed nor studying, compared with 24.8 per cent in major cities (figure 6.6.1)
- the proportion of Indigenous people aged 15 to 24 years who were neither employed nor studying was highest in the NT (42.1 per cent for Indigenous people compared with 7.3 per cent for non-Indigenous people), and lowest in the ACT (19.6 per cent for Indigenous people compared with 5.4 per cent for non-Indigenous people) (table 6A.6.4).

Figure 6.6.2 **Proportion of people aged 15 to 24 years who were not employed and not studying, 2001 and 2006[a, b]**



[a] Not employed comprises people unemployed or not in the labour force. Not in the labour force comprises people who are not employed or unemployed. Not in the labour force includes people who do not have a job and are not actively looking for work or not available to start work, are retired, pensioners and people engaged solely in home duties (ABS 2006). [b] CDEP participants were counted as employed in the 2006 Census (ABS 2006).

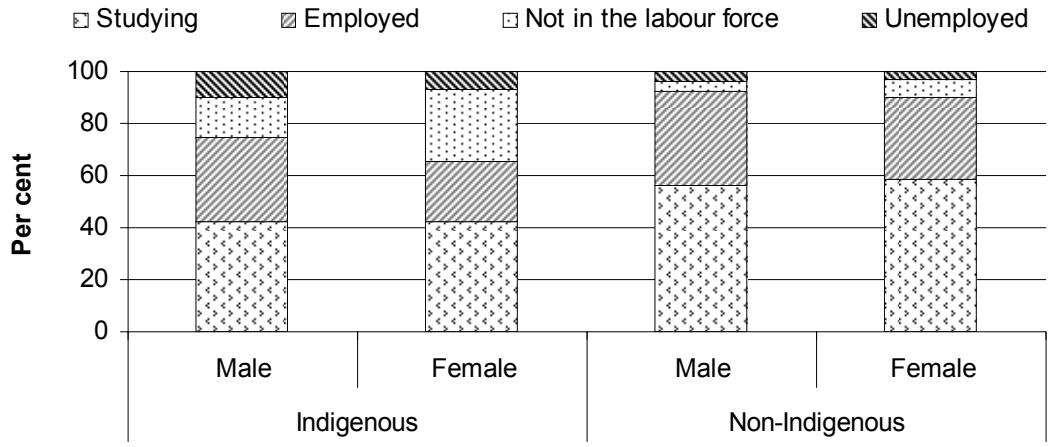
Source: ABS (unpublished), derived from *2006 Census of Population and Housing* and *2001 Census of Population and Housing*; tables 6A.6.4 and 6A.6.6.

Between 2001 and 2006:

- the proportions of Indigenous and non-Indigenous males and females, aged 15 to 24 years, who were not employed and not studying decreased (figure 6.6.2)
- the proportion of Indigenous males, aged 15 to 24, who were not employed and not studying decreased from 31.0 per cent to 24.7 per cent. The proportion of Indigenous females who were not employed and not studying decreased from 38.8 per cent to 33.6 per cent (figure 6.6.2)
- the gap between the proportions of Indigenous and non-Indigenous males, aged 15 to 24, who were not employed and not studying decreased from 20.3 to 16.7 percentage points. The gap for Indigenous and non-Indigenous females decreased from 26.7 to 23.6 percentage points (figure 6.6.2).

State and Territory data from 2001 and 2006 and remoteness data from 2006, on people, aged 15 to 24 years, who were not employed and not studying are included in tables 6A.6.3–6.

Figure 6.6.3 **Main activities of Census respondents aged 15 to 24 years, 2006**[a, b, c]



[a] Studying comprises people who are attending government, Catholic, other non-government secondary schools, technical or further educational institutions (including TAFE colleges), universities or other tertiary institutions (ABS 2006). [b] Employed comprises people in full-time work, part-time work and away from work. CDEP participants were included in the employed category in the 2006 Census (ABS 2006). [c] Not in the labour force comprises people who are not employed or unemployed. This includes people who do not have a job and are not actively looking for work or not available to start work, are retired, pensioners and people engaged solely in home duties (ABS 2006).

Source: ABS (unpublished), derived from *2006 Census of Population and*; table 6A.6.10.

Figure 6.6.3 shows the main activities of 2006 Census respondents aged 15 to 24 years. In 2006:

- Indigenous people were less likely to be studying than non-Indigenous people (42.4 per cent of Indigenous males and 42.5 per cent of Indigenous females were studying compared with 55.9 per cent of non-Indigenous males and 58.6 per cent of non-Indigenous females) (figure 6.6.3)
- Indigenous people were less likely to be employed than non-Indigenous people (32.4 per cent of Indigenous males and 23.3 per cent of Indigenous females were employed compared with 36.0 per cent of non-Indigenous males and 31.4 per cent of non-Indigenous females) (figure 6.6.3)
- Indigenous people were more likely to be unemployed than non-Indigenous people (9.8 per cent of Indigenous males and 7.2 per cent of Indigenous females were unemployed compared with 4.1 per cent of non-Indigenous males and 3.0 per cent of non-Indigenous females) (figure 6.6.3)
- Indigenous people were less likely to be in the labour force than non-Indigenous people (15.5 per cent of Indigenous males and 27.1 per cent of Indigenous females were not in the labour force compared with 3.9 per cent of

non-Indigenous males and 7.1 per cent of non-Indigenous females) (figure 6.6.3).

Between 2001 and 2006, for people aged 15 to 24 years:

- the proportions of Indigenous males and females who were studying increased (for Indigenous males from 37.7 per cent to 42.4 per cent and for Indigenous females from 38.4 per cent to 42.5 per cent) (tables 6A.6.8 and 6A.6.10)
- the proportions of Indigenous males and females who were employed remained constant (at around 30 per cent for Indigenous males and 22 per cent for Indigenous females) (tables 6A.6.8 and 6A.6.10)
- the proportions of Indigenous males and females who were unemployed decreased (for Indigenous males from 13.3 per cent to 9.8 per cent and for Indigenous females from 8.3 per cent to 7.2 per cent) (tables 6A.6.8 and 6A.6.10)
- the proportions of Indigenous males and females who were not in the labour force decreased (for Indigenous males from 18.3 per cent to 15.5 per cent and for Indigenous females from 31.1 per cent to 27.1 per cent) (tables 6A.6.8 and 6A.6.10).

Some people are not working or studying because of childcare responsibilities. Young Indigenous females are more likely to be outside the labour force and full time education due to home duties. In 2007, the fertility rate of Indigenous teenage females aged 15 to 19 years (70 babies per 1000 females) was more than four times the fertility rate of all teenage females of the same age (16 babies per 1000 females). For Indigenous females aged 20 to 24 years, the fertility rate (142.5 babies per 1000 females) was 2.6 times the rate for all females aged 20 to 24 years (55.8 babies per 1000) (ABS 2008). Teenage birth rates for Indigenous and non-Indigenous females are examined in more detail in section 5.2.

In 2006, Indigenous and non-Indigenous females, aged 15 to 24 years, who were unemployed or not in the labour force, provided unpaid child care at higher rates than employed females of the same age (48.7 per cent of Indigenous females and 44.9 per cent of non-Indigenous females, who were unemployed or not in the labour force, provided unpaid child care, compared to 29.0 per cent of Indigenous females and 14.0 per cent of non-Indigenous females, who were employed) (table 6A.6.13).

Data on people, aged 15 to 24 years, who provided unpaid child care, are included in tables 6A.6.11–16. Refer to section 4.7 for data on the post secondary participation and attainment.

The 'outcome from education' approach

This approach examines the labour force status of people who have, and have not, achieved qualifications of various levels. It shows the relationship between employment outcomes and attainment of a certain level of educational qualification. Certificate level 3 is usually considered the minimum qualification necessary to substantially improve a person's employment outcomes (see section 4.7 for more information on post secondary education, participation and attainment).

Table 6.6.1 **Labour force status, people aged 25–64 years, 2001 and 2006**[a, b]

	2001		*2006*	
	Indigenous	*Non-Indigenous*	*Indigenous*	*Non-Indigenous*
Labour force participation as a proportion of the population aged 25–64 years (%)				
No non-school qualification[a]	51.8	66.9	53.0	68.5
Certificate I & II	70.7	77.7	72.1	78.8
Certificate III & IV	79.7	85.1	81.0	86.1
Advanced diploma & diploma	78.9	82.5	79.4	82.7
Bachelor degree of higher [b]	85.0	87.7	86.2	87.5
Employed people as a proportion of the labour force aged 25–64 years (%)				
No non-school qualification[a]	81.0	92.3	84.2	94.4
Certificate I & II	83.6	93.9	84.4	92.8
Certificate III & IV	88.0	95.1	91.8	96.8
Advanced diploma & diploma	92.0	95.9	92.9	96.9
Bachelor degree or higher[b]	94.4	96.9	95.7	97.5

[a] Comprises people who have a qualification that is out of scope of the Australian Standard Classification of Education, people with no qualification, and people still studying for a first qualification. [b] Includes bachelor degree level, graduate diploma & graduate certificate level, and postgraduate degree level.

Source: ABS (unpublished), derived from *2006 Census of Population and Housing* and *2001 Census of Population and Housing*; tables 6A.6.22 and 6A.6.28.

In 2006, for people aged 25 to 64 years:

- labour force participation and employment rates for Indigenous people were lower than for non-Indigenous people, for all levels of qualifications (table 6.6.1)
- the gaps between labour force participation rates for Indigenous and non-Indigenous people, and employment rates for Indigenous and non-Indigenous people, narrowed as qualification levels increased. For example, the employment rate for Indigenous people holding a certificate I or II was 84.4 per cent compared with 92.8 per cent for non-Indigenous people — a gap of 8.4 percentage points. The employment rate for Indigenous people holding a bachelor degree or higher was 95.7 per cent compared with 97.5 per cent for non-Indigenous people — a gap of 1.8 percentage points (table 6.6.1)

- for both Indigenous and non-Indigenous people, the labour force participation rates for those with certificate III or higher were significantly higher than for those with lower or no qualifications (table 6.6.1)
- increases in qualifications from no qualification to bachelor degree or higher were associated with greater increases in labour force participation and employment rates for Indigenous people (33.2 percentage points and 11.5 percentage points, respectively) than for non-Indigenous people (19.0 percentage points and 3.1 percentage points, respectively) (table 6.6.1).

Between 2001 and 2006, for people aged 25 to 64 years:

- there was an increase in labour force participation and employment rates for Indigenous people with all levels of qualifications (table 6.6.1)
- there was an increase in labour force participation and employment rates for non-Indigenous people with most levels of qualifications (except for a decrease in the employment rate for non-Indigenous people with a certificate level I or II and non-Indigenous people with a bachelor degree or higher) (table 6.6.1)
- the gaps between labour force participation rates for Indigenous and non-Indigenous people, and employment rates for Indigenous and non-Indigenous people, decreased slightly for most levels of qualifications (with bigger decreases in the gaps between Indigenous and non-Indigenous employment rates for people with a certificate I and II (from 10.4 to 8.5 percentage points), and for people with a certificate III and IV (from 7.1 to 5.0 percentage points) (table 6.6.1).

Tables 6A.6.17–28 provide data on labour force status by level of qualifications for 2001 and 2006. Section 4.6 contains information on employment of people in Community Development Employment Projects (CDEP).

Examples of successful programs in increasing Indigenous higher education attainment are described in box 4.7.2 in chapter 4. Box 8.1.2 in chapter 8 provides some examples of successful programs in improving Indigenous employment outcomes.

The Report on Government Services (SCRGSP 2009) contains data on the proportion of TAFE graduates who reported being in employment and/or continued on to further study after completing a TAFE course.

Nationally, in 2007:

- 69.1 per cent of Indigenous TAFE graduates indicated that they were employed after completing a course (compared with 78.8 per cent of all TAFE graduates)

- 30.8 per cent of Indigenous TAFE graduates reported they had continued on to further study (compared with 32.8 per cent of all TAFE graduates) (SCRGSP 2009, figure 5.43).

Data on TAFE graduates' employment and/or further study outcomes is also available by state and territory (SCRGSP 2009, figure 5.43).

6.7 Future directions in data

Indigenous cultural studies

Currently, there are very limited data on Indigenous curriculum and staff, with no change in data since the 2007 report. The 2008 NATSISS asked Indigenous respondents whether they had been taught anything about Aboriginal culture at school, or as part of the post-school studies. These data will be available from late 2009.

Transition from school to work

The ABS program of ongoing specific Indigenous household surveys will continue to provide selected education and labour data on a three-yearly cycle to report on this indicator. NATSISS results for 2008 are expected to be available from late 2009.

A potential source of NT specific data is the Department of Education and Training (DET) 'Down the Track' student destination survey on 2006 school leavers for which results were distributed within the department in 2007 (DET 2008).

Data on young people, aged 15 to 24 years, who are at risk of long-term disadvantage, are available at national and State and Territory level through the 2002 NATSISS, 2004–05 NATSIHS and the 2006 Census. The ABS program of ongoing specific Indigenous household surveys will continue to provide selected education and labour data on a three-yearly cycle to report on this indicator. NATSISS results for 2008 are expected to be available in October 2009.

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