



MONASH UNIVERSITY - ACER

CENTRE FOR THE ECONOMICS OF EDUCATION AND TRAINING

Education and training in an era of economic uncertainty

CEET 13th Annual National Conference

Indigenous students and completion of Year 12

Michael Long

Friday 30 October 2009

Ascot House, 50 Fenton St, Ascot Vale, Melbourne

Introduction

The Council of Australian Governments (COAG) has endorsed a *Closing the Gap* agenda designed to improve the lives of Indigenous Australians. The agenda is distilled in a series of targets, one of which is the goal of halving the gap for Indigenous students in Year 12 attainment or equivalent (Certificate II or above) attainment rates by 2020. One of the proposed measures for monitoring progress towards achieving this target is apparent secondary school retention.

This paper reviews estimates of recent changes in the gap in apparent Year 12 retention between Indigenous and non-Indigenous students using data from the MCEECDYA National Schools Statistics Collection. It also provides some alternative estimates of Year 12 participation using ABS experimental estimates of the Indigenous population.

It uses these estimates to explore the increases in Indigenous Year 12 retention required to halve the gap between Indigenous and non-Indigenous students and places these in the context of recent changes in the Year 12 retention of Indigenous students.

Policies

In November 2008 the Council of Australian Governments (COAG) agreed to a number of targets to improve the lives of Indigenous Australians. The targets and the surrounding policies, programs and strategies recognise the substantial disadvantages experienced by Indigenous Australians and embody an intent to reduce or eliminate those disadvantages.

The COAG *Closing the Gap* targets are:

- 1) closing the life expectancy gap within a generation;
- 2) halving the gap in mortality rates for Indigenous children under five within a decade;
- 3) ensuring all Indigenous four years olds in remote communities have access to early childhood education within five years;
- 4) halving the gap for Indigenous students in reading, writing and numeracy within a decade;
- 5) **halving the gap for Indigenous students in Year 12 attainment or equivalent attainment rates by 2020;** and
- 6) halving the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade. (COAG, 2009. *National Indigenous Reform Agreement (Closing the Gap)*, p. A-21).

Achieving the targets is underwritten by \$4.6 billion in Indigenous-specific funding over 10 years, funding that will resource reforms in remote housing, health, early childhood development, jobs and improvements in remote service delivery.

The policies, targets and strategies of the National Indigenous Reform Agreement, especially as they relate to education and halving the gap in attainment of Year 12 or its equivalent, build on other

COAG National Partnerships and policies and programs, that will affect educational outcomes for both Indigenous and non-Indigenous Australians—the National Education Agreement, the Low Socio Economic Status School Communities National Partnership Agreement, the Improving Teacher Quality National Partnership Agreement and the Literacy and Numeracy National Partnership Agreement.

Data

Accurate information about Indigenous Australians is difficult to obtain because:

- o Indigenous Australians are a relatively small proportion of the population. Sample sizes for Indigenous Australians in most omnibus surveys are too small to provide a basis for reliable analyses.
- o a significant proportion of persons do not respond to questions about their Indigenous status. Typically the proportion of missing responses is larger than the proportion of Indigenous Australians. Although non-respondents are usually treated as non-Indigenous in statistical analysis, it is likely that there are some Indigenous Australians in this category and even that they are over-represented among non-respondents.
- o Indigenous Australians are more difficult to collect information from than other Australians. A higher proportion of Indigenous Australians is homeless, a higher proportion lives in remote and very remote areas of Australia, a higher proportion speaks English as a second language and has poor literacy skills. The post enumeration survey (PES) to the 2006 Census suggested an undercount of the Indigenous population of 11.5% compared with 2.5% for the non-Indigenous population (estimates of the number of Indigenous Australians increase from the Census count of 454,799 to 513,977). Those who are more difficult to contact are likely to be more disadvantaged than those who are contacted.
- o the reliability and validity of responses to questions about Indigenous status are poor. The ABS conducts a high quality post-enumeration household survey (PES) that provides information not only about undercounting in the Census, but also about the consistency of Census results. For the 1991 Census, 17.5% of persons identified as Indigenous in the Census were recorded as non-Indigenous in the PES and the equivalent of 15.9% of the Indigenous count in the Census were found to have been classified as non-Indigenous in the Census, but Indigenous in the PES. Another indication of the poor data quality in many surveys and administrative collections is the sometimes large proportion of persons who report being both Indigenous and born outside Australia.
- o willingness to self-identify as Indigenous has increased over time. A feature of the 1991, 1996 and 2001 (but possibly not the 2006 Census) was the increasing number of Indigenous Australians by age cohort—an increase beyond that which could be explained by improved coverage by the Census. This increase might be associated with an increased willingness to identify as Indigenous.

While much of the above discussion draws on the Census as an example, it is applicable in varying degrees to other data sources.

The relatively small proportion of Indigenous people in the population means that most omnibus surveys should not be used for analyses of Indigenous Australians. Typically research in the area of education and the labour market relies on:

- o the Census of Population and Housing.
- o administrative collections such as DEEWR's Higher Education Student Collection, NCVER's VET Provider Collection, the MCEECDYA National Schools Statistics Collection and NAPLAN.
- o targeted surveys such as the ABS National Aboriginal and Torres Strait Islander Health Survey, 2004-05.

This awkwardness around the accuracy of data on Indigenous Australians is captured by the use of the word 'experimental' by the ABS before some of its estimates of the demography of Indigenous Australians—the estimates combine information from a number of sources (the Census, the PES, mortality and birth data, and so on) in an attempt to produce more accurate overall estimates of the number and sex and age distribution of the Indigenous population..

The recent revision of the ABS estimates of the life expectancy of Indigenous Australians is a case in point. The life expectancy at birth in 2005-2007 for Indigenous males is now estimated to be 67.2 years (11.5 years less than the life expectancy at birth for non-Indigenous males) and 72.9 years for Indigenous females (9.7 years less than that for non-Indigenous females). These new estimates of the life expectancy of Indigenous Australians are substantially higher than earlier estimates based on persons born in 1996-2001 (59.4 years for males and 64.8 years for females)—but the improvement has less to do with real changes in the health and well-being of Indigenous Australians than with changes to the estimation procedures.

The directions of the revisions to the estimates of life expectancy of Indigenous Australians are possibly unusual. Some of the problems with data collections for Indigenous Australians are likely to result in under-estimates of disadvantage (poor reliability of measures, increased willingness to identify as Indigenous and some undercounting) while possibly less frequently other problems will result in over-estimates of disadvantage (undercounting in some circumstances). The over-riding point, however, is the uncertainty surrounding a lot of information about Indigenous Australians.

Key performance measures

COAG has identified performance indicators to measure progress towards the *Closing the Gap* targets. Several performance measures are outlined for the goal of halving the gap for Year 12 or its equivalent by 2020.

1. **The proportion of 20-24 year-olds having attained at least a Year 12 or equivalent or AQF Certificate II.** (Source: ABS Census; Baseline: 2006 Census)
2. **Apparent secondary school retention rates** from Year 7/8 to:
 - a) Year 10
 - b) Year 12(Source: MCEECDYA National Schools Statistics Collection; Baseline: 2008)
3. **Attendance rates - Year 1 to Year 10** (Source: MCEETYA collation of jurisdictional administrative data; Baseline 2008 or 2007)

The performance indicators will be assessed annually by the COAG Reform Council and used at the national, jurisdictional and presumably regional (possibly defined by ARIA categories—documents

only refer to ‘geocoding’) level. Some sense of the required annual progress will be provided by calculating the linear trend required to achieve the targets by the designated dates.

Strategy

COAG expects to receive advice from MCEECDYA on a draft National Indigenous Education Action Plan for its endorsement in early 2010. Indications of some of the elements of the Action Plan are foreshadowed in the National Indigenous Reform Agreement:

- improving enrolment rates;
- improving attendance;
- improving student engagement;
- improving literacy and numeracy attainment;
- developing an Indigenous education workforce;
- up-skilling the teaching workforce to better support Indigenous students;
- improving parental and community engagement;
- improving ‘wrap around’ support, including through extended service school models;
- improving retention rates;
- improving transitions from school to further education and training; and
- creating high expectations for Indigenous young people.

The *Closing the Gap Clearinghouse* will provide an evidence base for jurisdiction to form strategies to engage with these elements and the other targets of the National Indigenous Reform Agreement. The Clearinghouse will provide a source of reliable information on a broad range of topics related to improving Indigenous outcomes.

Progress towards the targets will be built on successful local and regional strategies (including place-based approaches) that draw governments, communities, businesses and philanthropic organisations together to address local issues. State and Territory Implementation Plans under the National Partnerships will help to inform a clear picture of what is happening at a local and regional level in areas with concentrated Indigenous populations (focus areas), in order to assess how reforms are actually facilitating improvements and monitor progress to inform possible improvements to the approach.

States and Territories will evaluate the success of local and regional approaches and will work with the Commonwealth to provide advice on the usefulness of these approaches to drive progress in other policy reform areas.

Apparent Year 12 retention rates

Apparent secondary school retention rates to Year 12 are a widely used estimate of school completion. Their calculation involves dividing the number of students in Year 12 in a given year (say 2008) by the number of students in the corresponding commencing year of secondary school (say Year 7 in 2003 in NSW) and expressing it as a percentage.

Indigenous students and completion of Year 12

There are a number of well-known reservations about the resulting estimates, most of which follow from the lack of any necessary connection between the students starting secondary school in Year 7 or 8 and the students in Year 12 five or four years later:

- o Some young people may never enrol in secondary school—whether because of home schooling or early disengagement from school.
- o Some young people enrol in secondary school but may never be enrolled in the first Years of secondary school (Year 7 in NSW, Vic, Tas, NT and the ACT; Year 8 in Qld, SA, WA)—they are classified as ungraded.
- o Students can move between jurisdictions or school sectors, which affects jurisdiction or sector-specific estimates.
- o Some students arrive in Australia and begin their schooling after Year 7 (both migrants and international students) while others who were in Year 7 leave Australia before commencing Year 12.
- o Students repeat Year 12.
- o Students can repeat grades between Years 7 and Year 12.
- o The estimates are based on enrolment in Year 12 in about August of the school year, which may not correspond to completion of Year 12 or obtaining a Year 12 Certificate.
- o Year 12 can be completed outside the school sector (especially in TAFE Institutes). To the extent that this is encouraged in some jurisdictions (possibly such as NSW) more than others, it may explain differences in Year 12 retention between jurisdictions.
- o Adults completing Year 12 in school can be variously included or excluded.
- o The estimates are for full-time students only.

On balance, these aspects of school enrolments typically lead to Year 12 retention rates over-stating true Year 12 completion rates.

Some of these problems are more important for estimates of Indigenous students than for non-Indigenous students. Disproportionately high numbers of Indigenous students are classified as ‘secondary-ungraded’ or never start secondary school. Additionally, for Indigenous students there is the problem of them being correctly identified as Indigenous in the National Schools Statistics Collection at Year 7. Indigenous students are more likely to be correctly classified by schools later on when they apply for ABSTUDY. The enrolment data contain instances of grade progression rates for Indigenous students greater than 100%—the result of students not being classified in lower grades as Indigenous.

Table 1 provides estimates of apparent Year 12 retention rates for 1998 to 2008. For non-Indigenous students apparent Year 12 retention rates have crept up from about 71% to about 74% over the decade—and some of this increase might reflect the increasing number of international students in schools and the effect of substantial increases in the level of net migration. From 2004 onwards, apparent Year 12 retention seems to have declined slightly, although the economic downturn in 2008-09 might reverse that trend.

Another of COAG’s educational targets is to lift the levels of attainment of Year 12 or its equivalent by 19-year-olds to 90% by 2015. Depending on the level of success in achieving this target, and the extent to which it is achieved through increased levels of Year 12 completion rather than through increased attainment of Certificate II or above, apparent Year 12 retention rates for non-Indigenous students might be expected to increase.

Indigenous students and completion of Year 12

Table 1: Apparent retention to Year12 in secondary school by Indigenous status and state, 1998 to 2008

	NSW	Vic.	Qld	SA	WA	Tas	NT	ACT	Aust
	%	%	%	%	%	%	%	%	%
<i>Indigenous</i>									
1998	31.2	42.1	49.8	18.2	19.8	33.8	11.2	100.0	31.8
1999	30.0	42.4	50.7	21.4	19.7	41.9	22.5	96.7	34.4
2000	33.7	32.7	52.1	24.2	22.9	39.5	18.8	61.4	36.0
2001	30.2	36.2	51.6	29.9	23.2	43.6	18.3	47.5	35.3
2002	30.6	34.3	54.9	31.1	24.7	51.3	19.4	69.5	37.3
2003	31.6	36.6	54.9	27.5	26.3	47.3	24.6	67.1	38.2
2004	31.7	35.7	56.3	34.1	27.0	46.5	29.2	88.3	39.1
2005	31.0	40.8	53.2	30.7	28.8	39.1	37.6	60.3	38.7
2006	30.6	38.4	53.4	36.0	31.3	35.9	37.7	59.1	39.4
2007	33.9	45.5	55.8	40.1	29.5	42.1	43.8	59.8	42.1
2008	35.9	46.4	60.4	44.0	40.2	31.7	47.5	53.1	45.8
<i>Non-Indigenous</i>									
1998	66.7	75.3	76.4	65.6	69.9	59.4	42.1	90.5	70.8
1999	67.2	75.6	76.7	65.9	70.4	63.5	51.9	92.0	71.5
2000	67.2	76.7	76.7	64.5	70.4	65.5	49.0	86.6	71.6
2001	67.9	78.7	78.3	65.4	70.9	64.5	49.7	88.6	72.7
2002	69.5	80.2	80.5	65.7	72.5	65.4	52.0	87.6	74.3
2003	70.1	80.6	80.6	66.1	70.7	66.2	55.5	89.1	74.5
2004	70.7	80.4	80.5	66.9	72.0	67.7	58.0	88.1	74.9
2005	70.6	79.9	79.3	69.3	72.1	60.8	58.5	87.2	74.6
2006	70.2	79.4	78.3	70.2	71.6	59.6	56.9	88.4	74.1
2007	69.4	79.7	78.1	71.3	70.2	60.3	60.5	84.6	73.8
2008	69.3	78.9	77.7	72.5	73.5	59.7	58.9	84.5	73.9
<i>Differences in 2008</i>									
% point	33.4	32.5	17.3	28.5	33.3	28.0	11.4	31.4	28.1
Ratio	0.52	0.59	0.78	0.61	0.55	0.53	0.81	0.63	0.62

Adapted from ABS, *Schools Australia 2008*, 4221.0 and associated data cubes. Year 12 enrolments in the numerator are for full-time students aged 19 or younger. Values for the denominator are full-time enrolments in Year 7 (NSW, Vic, Tas, ACT) or Year 8 (Qld, SA, WA, NT) suitably lagged.

In contrast to the apparent Year 12 retention rates of non-Indigenous students, those for Indigenous students have increased strongly, from about 32% in 1998 to 46% in 2008—and the increase has been fairly uniform across that period, although more strongly from 2006, when it increased from 39% to 46% in 2008.

To a considerable extent, then, improvement in Year 12 completion has been an area of considerable success for Indigenous Australians. The gap between the apparent Year 12 retention rate of Indigenous and non-Indigenous students fell from 39 percentage points to 28 percentage points—not quite by half, but in an area where improvements have sometimes appeared difficult to find, what might almost be termed a pleasing result.

Indigenous students and completion of Year 12

Table 2: Estimated proportion of persons of Year 12-age enrolled in Year 12 by Indigenous status and state, 1993 to 2008

	NSW	Vic.	Qld	SA	WA	Tas	NT	ACT	Aust
	%	%	%	%	%	%	%	%	%
<i>Indigenous</i>									
1993	20.3	15.5	40.8	22.1	20.2	22.7	7.5	22.0	24.0
1994	19.4	13.7	41.2	25.3	16.9	18.0	7.8	18.9	23.3
1995	23.5	16.5	37.9	18.2	17.2	27.1	5.9	33.3	23.5
1996	21.6	21.1	37.4	14.9	15.3	25.0	7.0	30.2	22.8
1997	21.5	21.0	35.9	14.1	18.6	29.9	8.4	38.8	23.2
1998	22.7	20.6	40.4	15.1	19.2	29.4	8.7	46.8	25.0
1999	21.7	20.2	40.8	18.3	19.0	33.3	10.0	37.5	25.3
2000	24.7	19.1	45.5	20.6	22.2	35.8	9.4	43.8	28.0
2001	22.4	23.9	45.0	25.8	22.7	33.5	9.8	34.0	27.8
2002	23.1	22.0	47.7	29.0	24.8	47.8	10.1	48.6	29.9
2003	23.6	24.2	47.1	23.0	25.6	40.1	11.8	63.7	29.9
2004	25.2	23.0	46.6	30.6	27.0	31.5	14.3	60.0	30.7
2005	25.0	27.0	46.5	26.4	30.7	31.1	18.1	45.4	31.5
2006	24.8	27.3	50.0	31.2	33.0	32.6	20.1	42.3	33.3
2007	28.8	31.8	54.6	35.9	33.5	37.7	24.1	51.9	37.2
2008	30.1	32.0	55.9	40.7	44.1	31.5	28.9	44.5	39.9
<i>Non-Indigenous</i>									
1993	67.5	74.0	73.9	77.4	71.3	58.6	65.6	86.0	71.6
1994	67.1	72.1	72.2	71.9	69.8	57.0	59.9	87.9	70.0
1995	65.6	71.5	69.4	61.3	67.3	59.2	59.4	85.1	67.8
1996	64.0	71.1	69.7	58.5	67.8	54.6	57.6	85.1	66.9
1997	63.8	72.5	71.6	60.7	69.4	59.4	58.9	88.1	68.1
1998	65.1	72.8	73.8	63.5	71.2	65.1	55.2	88.8	69.5
1999	66.1	73.6	76.1	65.3	71.3	69.4	58.0	90.7	70.8
2000	65.7	72.7	78.1	64.1	71.8	70.8	58.6	89.4	70.8
2001	64.7	73.9	76.0	64.7	71.2	70.5	61.7	86.5	70.3
2002	66.6	74.8	77.2	64.1	72.7	70.1	64.5	86.9	71.5
2003	66.5	74.1	76.9	64.2	70.4	67.1	66.9	86.4	71.0
2004	67.3	73.5	75.4	63.6	70.3	58.9	71.0	83.4	70.6
2005	66.8	72.4	74.8	65.0	70.7	57.9	65.8	84.9	70.2
2006	67.0	73.0	73.9	67.3	69.8	60.4	60.2	87.4	70.3
2007	66.2	70.4	73.8	66.7	69.0	59.8	64.1	84.7	69.2
2008	66.0	72.6	72.4	66.5	68.2	61.4	61.2	87.4	69.4
<i>Differences in 2008</i>									
% point	35.9	40.6	16.5	25.8	24.1	29.9	32.3	42.9	29.5
Ratio	0.46	0.44	0.77	0.61	0.65	0.51	0.47	0.51	0.57

Adapted from ABS, *Experimental estimates of Aboriginal and Torres Strait Islander Australians*, Jun 2006, 3238.0.55.001; ABS, *Experimental estimates and projections, Indigenous Australians, 1991 to 2009* 3238.0; ABS, *Experimental estimates of the Aboriginal and Torres Strait Islander population, 1991-1996*, 3230.0; ABS, *Schools Australia 2008*, 4221.0, ABS, *Population by age and sex, Australian states and territories*, June 2008, 3201.0; and associated data cubes. Values are approximations. Year 12 enrolments in the numerator are for full-time students aged 19 or younger. Population in the denominator is one-fifth of 15 to 19 year-olds. Values for the population of Indigenous Australian between censuses were estimated by linear interpolation and population estimates of non-Indigenous Australians were estimated as the difference between the overall population and the Indigenous population.

The improvement, however, has not been evenly spread across jurisdictions. There has been little change in New South Wales (which has a relatively large Indigenous population) overall (but some increase from 2006 onwards) or in Victoria (which has a small Indigenous population). Instead the improvement has been driven by substantial improvements in the Northern Territory where apparent Year 12 retention rates increased more than four-fold from a low base of 11.2% in 1998 to 47.5% in 2008, especially from 2003 onwards. The improvement in the Northern Territory explains about half of the national increase. Western Australia and South Australia also recorded increases in apparent Year 12 retention of over 20 percentage points, although much of the increase in Western Australian occurred in 2008.

The increase in Queensland was somewhat less than in some other jurisdictions (about 11 percentage points), but was from an initial high base (48.9%) to a level that was still the highest of any of the jurisdiction (60.4%) and (in the context of indigenous disadvantage) not too far below the national average for non-Indigenous students. In 2008 New South Wales at 35.9% had the lowest apparent Year 12 retention for Indigenous students (excluding the results for Tasmania, where estimates of Year 12 retention are variable from year to year).

Year 12 participation rates

A number of possible problems compromise the interpretation of apparent Year 12 completion rates. Participation rates provide an alternative approach to measuring changes in the level of engagement of young people with schooling—the number of 15 to 19 year-olds attending school divided by the number of 15 to 19 year-olds in the population.

Participation rates are in some ways a poor relation to apparent Year 12 retention rates. They do not focus on Year 12 or school completion and comparisons across jurisdictions are not very meaningful because of the different age-grade structures of the states and territories. Queensland, for instance, all else equal, will always have a lower 15 to 19 year-old school participation rate because Year 12 graduates are younger in Queensland than in other jurisdictions.

Here we explore the results of a participation measure that is unorthodox—the number of students in Year 12 divided by one fifth of the number of 15 to 19 year-olds. The latter should be approximately the number of 17 year-olds in the population, subject to the age distribution across the five years spanned by the category. The measure is motivated by a desire to focus on Year 12 students and to use the ABS experimental estimates for the Indigenous population by jurisdiction, which are available in five year age bands. These values are clearly approximations, but they avoid many of the problems of apparent retention rates. More work could be put into trying to better approximate the different Year 12 age profiles of the various jurisdictions—but it is unlikely to make much difference.

Table 2 presents these estimates for 1993 to 2008. The time span is greater because they do not require information about enrolments four or five years prior to the first estimate in the series. Nevertheless the differing periods covered by Tables 1 and 2 means that care must be taken in making the comparisons.

The main story in the two tables is similar—Indigenous Year 12 participation rates have been increasing nationally from at least 1998 onwards (Table 2 shows that the increase began possibly a year or so earlier)—and the increase has been quite substantial. In fact in both cases, the values have about doubled from 1998.

For non-Indigenous students, the pattern of Year 12 participation rates over time is similar to that of apparent Year 12 retention rates. The longer time span, however, shows that participation rates were lower in 2008 than in 1993.

A major difference is that the values in Table 2 are lower than in Table 1—nationally Indigenous apparent Year 12 retention in 2008 was 45.8% compared with Year 12 participation rates of only 39.9%. A similar but smaller difference exists for non-Indigenous Australians. In both cases the lower values for participation are consistent with undercounting of Indigenous students at the start of secondary school and the arrival of new non-Indigenous school students after the first Year of secondary school.

Another difference is in the relative levels of Indigenous Year 12 participation across the jurisdictions in 2008. The Northern Territory has the lowest Indigenous Year 12 participation among the jurisdictions (28.9%), compared with an above average Year 12 retention rate. The increase, however, has still been stunning—a near four fold increase off a very low base, or an increase of more than 20 percentage points. These increases are above the national average.

New South Wales also has a relatively low value for Indigenous Year 12 participation (30.1%) despite increasing from about 1999 and especially in 2007 and 2008. And Victoria is little different (32.0%), despite having a relatively much smaller Indigenous population and therefore presumably requiring fewer resources to produce better outcomes.

Queensland continues to stand out as the state with the highest level of Indigenous Year 12 participation (55.9%), having exhibited only average growth over the period, but from a higher initial base. South Australia and especially Western Australia have shown substantial growth from about 1996-97. While in 2008 South Australia is just above the national average (40.7%), Western Australia has moved from below average to above average.

The gap between national Indigenous and non-Indigenous Year 12 participation rates is only marginally higher than for apparent Year 12 rates. For individual jurisdictions, however, the differences are sometimes marked. As for apparent Year 12 rates, the gap for Year 12 participation is narrowest in Queensland, followed by Western Australia. The gap is widest in Victoria, New South Wales and the Northern Territory.

Closing the gap

Table 3 takes values for 1998 and 2008 from Tables 1 and 2 and focuses on the gaps between Indigenous and non-Indigenous students in 1998 and in 2008 and the extent to which those gaps closed between 1998 and 2008.

The first panel in Table 3 focuses on apparent Year 12 retention. Nationally it was 31.8% for Indigenous students in 1998 and 70.8% in 2008—a gap of 39.0 percentage points. By 2008, this gap had fallen to 28.1 percentage points, a decline of 27.9% (31.8%-28.1%)/31.8%.

Absolute differences between groups measured in percentage points are only one approach to measuring the extent to which there is a gap and the extent to which it has closed. Arguably the ratio of Indigenous to non-Indigenous retention rates comes closer to the meaning of 'equity'. This ratio was 0.45 nationally in 1998 and increased to 0.62 in 2008 (values closer to 1 indicate greater equity) and the ratio of the two ratios is 1.38 (higher values indicate greater convergence).

Indigenous students and completion of Year 12

Table 3: Estimates of the narrowing of the gap in Year 12 retention and participation between Indigenous and non-Indigenous students by state, 1998 to 2008

	NSW %	Vic. %	Qld %	SA %	WA %	Tas %	NT %	ACT %	Aust %
Apparent retention to Year 12									
1998									
Indig	31.2	42.1	49.8	18.2	19.8	33.8	11.2	100.0	31.8
Non-I	66.7	75.3	76.4	65.6	69.9	59.4	42.1	90.5	70.8
% point	35.5	33.2	26.6	47.4	50.1	25.6	30.9	-9.5	39.0
Ratio	0.47	0.56	0.65	0.28	0.28	0.57	0.27	1.10	0.45
2008									
Indig	35.9	46.4	60.4	44.0	40.2	31.7	47.5	53.1	45.8
Non-I	69.3	78.9	77.7	72.5	73.5	59.7	58.9	84.5	73.9
% point	33.4	32.5	17.3	28.5	33.3	28.0	11.4	31.4	28.1
Ratio	0.52	0.59	0.78	0.61	0.55	0.53	0.81	0.63	0.62
98-08									
% point	5.9	2.1	35.0	39.9	33.5	-9.4	63.1	---	27.9
Ratio	1.11	1.05	1.19	2.19	1.93	0.93	3.03	0.57	1.38
Participation in Year 12									
1998									
Indig	22.7	20.6	40.4	15.1	19.2	29.4	8.7	46.8	25.0
Non-I	65.1	72.8	73.8	63.5	71.2	65.1	55.2	88.8	69.5
% point	42.4	52.2	33.4	48.4	52.0	35.7	46.5	42.0	44.5
Ratio	0.35	0.28	0.55	0.24	0.27	0.45	0.16	0.53	0.36
2008									
Indig	30.1	32.0	55.9	40.7	44.1	31.5	28.9	44.5	39.9
Non-I	66.0	72.6	72.4	66.5	68.2	61.4	61.2	87.4	69.4
% point	35.9	40.6	16.5	25.8	24.1	29.9	32.3	42.9	29.5
Ratio	0.46	0.44	0.77	0.61	0.65	0.51	0.47	0.51	0.57
98-08									
% point	15.3	22.2	50.6	46.7	53.7	16.2	30.5	-2.1	33.7
Ratio	1.31	1.56	1.41	2.57	2.40	1.14	3.00	0.97	1.60

Adapted from Tables 1 and 2. The *closing of the gap* between 1996 and 2008 is expressed as a reduction in the percentage point gap in 1998 compared with 2008. For instance, nationally the gap in apparent retention in 1998 was 39.0 percentage points and in 2008 was 28.1 percentage points, a closing of the gap of 27.9%. Ratio values 98-08 divide the 2008 ratio by the 1998 ratio (higher values correspond to a higher closing of the gap).

The value of 27.9% shows that over the last decade, the gap in apparent retention between Indigenous and non-Indigenous Australians has declined by more than a quarter. The goal of halving this gap by 2020 while at the same time increasing overall Year 12 retention is both easier and harder than the changes over the last decade. On the one hand, the narrowing of the gap that has already occurred means that the absolute improvement required in the apparent retention of Indigenous students to achieve a further 50% reduction in the gap is smaller. On the other hand, the goal of increasing overall Year 12 or equivalent attainment of young people to 90% by 2015 makes the achievement of the goals somewhat more difficult.

The arithmetic of halving the gap might look something like this:

- o Assume that apparent Year 12 retention of non-Indigenous Australians increases from 73.9% to 78.8% to support the goal of 90% of 19 year-olds achieving Year 12 or its equivalent by

2015. This is a somewhat arbitrary assumption, but the arithmetic can be pursued with different values.

- o The gap in retention between Indigenous and non-Indigenous Australians is 28.1 percentage points in 2008 (the base year against which growth towards the targets is measured).
- o The goal is therefore that Indigenous Year 12 retention should reach 64.7% (78.8%-14.1%) by 2020.
- o Given that the 2008 value for Indigenous retention is 45.8%, the required growth in Indigenous retention is 18.9 percentage points.
- o Growth between 1998 and 2008 was 14.0 percentage points.
- o But there are two extra years in which to achieve the goal.

Subject to assumptions about any increase in the retention rates of non-Indigenous students, the goal of halving the gap between Indigenous and non-Indigenous Year 12 retention requires little more than recent growth in Indigenous retention. This may be even easier given that growth in Indigenous Year 12 retention was stronger in the last few years of the period 1998 to 2008.

The closing of the gap in Year 12 retention over the years 1998 to 2008 was strongest in the Northern Territory, South Australia, Queensland and Western Australia. There was little improvement in either New South Wales or Victoria. The values for Tasmania and the ACT are possibly too volatile to be meaningful, but offer little sign of systematic improvement.

Table 3 also contains corresponding values for participation rates in Year 12. These also indicate a substantial closing of the gap in Year 12 participation between 1998 and 2008. Nationally the difference declined by about a third (33.7%). The relative contributions of the jurisdictions to closing the gap are slightly different from that for Year 12 retention. The gap closed most in Western Australia (53.7%), Queensland (50.6%) and South Australia (46.7%). Changes in the Northern Territory were lower (30.5%), but well above those in Victoria (22.2%), Tasmania (16.2%), New South Wales (15.3%) or the ACT, where the gap widened slightly (-2.1%). Three states therefore, more or less halved the gap in Year 12 participation in the decade 1998 to 2008.

Concluding remarks

Several points emerge from Tables 1 and 2:

- o The major story from both Year 12 retention and Year 12 participation measures is of substantial improvement in school completion among Indigenous students between about 1996 and 2008, and the improvement mostly has been strongest in the last few years.
- o This improvement for Indigenous students has substantially narrowed the gap between Indigenous and non-Indigenous students in terms of Year 12 retention and participation, because rates for non-Indigenous students have been almost unchanged (and if allowance is made for the increase in the number of international students enrolling in Year 12, non-Indigenous Year 12 rates may have fallen).
- o The narrowing of the gap between 1998 and 2008 has been greatest in Western Australia, Queensland and South Australia. The gap has narrowed in Northern Territory, with retention measures showing substantial improvement and participation measures showing an average improvement. Progress has been far less evident in New South Wales, Victoria, Tasmania and the ACT.

Indigenous students and completion of Year 12

- o Achieving the goal of halving the difference between Indigenous and non-Indigenous Year 12 retention might not be a courageous goal:
 - Three states—Western Australia, Queensland and South Australia—halved or almost halved the gap in Year 12 retention between Indigenous and non-Indigenous students between 1998 and 2008.
 - Under some possibly reasonable assumptions, the goal of halving the difference between the Year 12 retention of Indigenous and non-Indigenous students require only a little more improvement in Indigenous Year 12 retention between 2008 and 2020 than was achieved between 1998 and 2008.
- o Interaction with other educational targets (especially the goal of 90% of 19 year-olds having attained Year 12 or a Certificate II or higher by 2015) may mean that the drawing of simple linear growth trajectories between 2008 and 2020 should be reconsidered.

Appendix

Table A1: Estimated resident Indigenous population, 30 June 2006

State or Territory	Indigenous population (000s)	Distribution of total Indigenous population %	Percent of total state or territory population %	Distribution of total Australian population %
All persons				
New South Wales	152.7	29.5	2.2	32.9
Victoria	33.5	6.5	0.7	24.8
Queensland	144.9	28.0	3.5	19.8
South Australia	28.1	5.4	1.8	7.6
Western Australia	71.0	13.7	3.4	9.9
Tasmania	18.4	3.6	3.8	2.4
Northern Territory	64.0	12.4	30.4	1.0
ACT	4.3	0.8	1.3	1.6
Australia	517.0	100.0	2.5	100.0
15 to 19 year-olds				
New South Wales	16.4	29.8	3.6	32.3
Victoria	3.5	6.4	1.0	24.6
Queensland	15.1	27.6	5.3	20.0
South Australia	3.1	5.7	3.0	7.4
Western Australia	7.5	13.6	5.1	10.4
Tasmania	2.2	4.0	6.5	2.4
Northern Territory	6.6	12.0	42.4	1.1
ACT	0.5	0.8	1.9	1.7
Australia	54.9	100.0	3.9	100.0

Adapted from ABS, *Experimental Estimates of Aboriginal and Torres Strait Islander Australians*, Jun 2006, 3238.0.55.001.