



## MCEETYA on the Web

The National Report on Schooling in Australia provides, in an accessible and readable form, a comprehensive account of schooling to the nation. This edition has been prepared to accompany and complement the full text electronic version that is available at: <http://www.curriculum.edu.au/anr>.

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National Report on Schooling in Australia 2000  
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# Preface

## The purpose of the National Report

In April 1989, Commonwealth, State and Territory ministers for education agreed to a set of Common and Agreed National Goals for Schooling in Australia. At the same time, ministers determined that there should be an annual national report on schooling in Australia, informing the Australian people on progress towards the achievement of these national goals. It was envisaged that the report would also:

- provide commentary on the operation of school systems and participation of students in schooling
- report on the school curriculum
- describe student outcomes
- summarise the application of financial resources to schools
- report on school topics of national interest
- highlight important national and State initiatives in schooling
- provide an authoritative source of information and a sound basis for informed comment on various aspects of schooling.

Even though the 1989 set of Common and Agreed National Goals for Schooling in Australia has since been revised, the *National Report on Schooling in Australia 2000* has been prepared with these purposes in mind. As well, it provides a means whereby schools and systems can satisfy their educational accountability requirements. It describes the progress made during 2000 towards the achievement of the national goals for schooling throughout approximately 10,000 schools across Australia's eight States and Territories.

## The structure of the report

The structure of the *National Report on Schooling in Australia 2000* is significantly different to that used in previous editions. The changes reflect the introduction of the National Goals for Schooling in the Twenty-first Century, which the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) ministers have agreed provides an appropriate framework for reporting. However, in order to focus this reporting, ministers decided that, from time to time, some

priority areas should be identified. The initial set of priorities for reporting is:

- literacy
- numeracy
- student participation, retention and completion
- vocational education and training (VET) in schools
- science
- information technology.

As well as incorporating these priorities, this edition of the National Report has been prepared to accompany and complement the electronic version that is available at <http://www.curriculum.edu.au/anr>. The web version has been produced to allow increased access to the material in the report and in a manner that enables more timely publication of important data. This is the first time that a web-based version of the National Report has been published and ministers believe it is an important step forward in line with the spirit of the revised national goals.

A further development in this edition is the inclusion of case studies in each of three of the priority areas. The case studies describe examples of innovation and best practice in areas such as: school organisation, pedagogy and curriculum, school performance measurement and review, professional development, teacher education and system improvement. The publication of case studies this year is intended as a trial and the material has been presented in a manner that, it is hoped, will be valuable to school personnel as a point of comparison and example.

As in 1999, ministers agreed to the early publication of national benchmarking results. As a result, a preliminary paper containing national benchmarking results for reading and numeracy in each of years 3 and 5 was published in both print and electronic formats. This publication incorporates the findings of the preliminary paper as part of Chapter 6, 'Literacy student outcomes', and Chapter 7, 'Numeracy student outcomes'.

The report consists of four parts:

## Part A – Highlights

This small section provides a brief overview of the highlights of the year 2000 by drawing attention to developments,

achievements and issues of national significance. Each topic is considered in greater detail in later sections of the report.

## Part B – Context of Australian Schooling

This section contains two chapters that provide background information. The first of these, 'The context of Australian schooling', outlines the context and structure, as well as providing information on the responsibility for schooling in Australia, including the role of MCEETYA. The second, 'Resourcing Australia's schools', sets out some details concerning the manner and levels of funding for both government and non-government schools and outlines changes made during 2000.

## Part C – Student Outcomes

This represents the main body of the report and it details the progress made by Australian schools in their pursuit of the national goals during the year 2000. To a large extent, the section focuses on the priority areas for reporting as decided by MCEETYA. However, in line with the Council's continuing concern for the educational outcomes being achieved by Indigenous students, the section includes a chapter that concentrates on this issue.

## Part D – Appendices

This section contains an index, glossary and a number of appendices. Appendix 1 contains the statistical data analysed in the report. The statistics are presented in tables describing the

key features of Australian schooling in 2000. The presentation of data in this appendix, as in other sections of the report is in accordance with agreed protocols that are set out in Appendix 4, 'Measurement issues'. Lists of publications and explanatory notes are also provided here for reader reference.

## Responsibility for the report

This report is printed under the authority of MCEETYA. To facilitate the preparation of the National Report, the Council has established a taskforce with representation from each State and Territory as well as from the National Council of Independent Schools' Associations (NCISA), and the National Catholic Education Commission (NCEC). The taskforce has responsibility to prepare recommendations for the Council concerning the content and structure of the report. As well, together with the MCEETYA Secretariat, the taskforce is required to oversee the production of the report once the content has received ministerial approval.

As part of the changes that have accompanied the introduction of the National Goals for Schooling in the Twenty-first Century, the Council established the National Education Performance Monitoring Taskforce (NEPMT). This taskforce was set up with responsibility to provide ministers with recommendations regarding the processes to be used to monitor the progress of school education in Australia. The *National Report on Schooling in Australia 2000* includes details of the monitoring processes being put in place by the NEPMT.

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# Common and Agreed National Goals for Schooling in Australia

## Background

In April 1999, State, Territory and Commonwealth ministers of education met as the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) in Adelaide. At that meeting, ministers endorsed a new set of National Goals for Schooling in the Twenty-first Century. The new goals were released in April 1999 as the *Adelaide Declaration on National Goals for Schooling in the Twenty-first Century*.

## Preamble

Australia's future depends upon each citizen having the necessary knowledge, understanding, skills and values for a productive and rewarding life in an educated, just and open society. High quality schooling is central to achieving this vision.

This statement of national goals for schooling provides broad directions to guide schools and education authorities in securing these outcomes for students.

It acknowledges the capacity of all young people to learn, and the role of schooling in developing that capacity. It also acknowledges the role of parents as the first educators of their children and the central role of teachers in the learning process.

Schooling provides a foundation for young Australians' intellectual, physical, social, moral, spiritual and aesthetic development. By providing a supportive and nurturing environment, schooling contributes to the development of students' sense of self-worth, enthusiasm for learning and optimism for the future.

Governments set the public policies that foster the pursuit of excellence, enable a diverse range of educational choices and aspirations, safeguard the entitlement of all young people to high quality schooling, promote the economic use of public resources, and uphold the contribution of schooling to a socially cohesive and culturally rich society.

Common and agreed goals for schooling establish a foundation for action among State and Territory governments with their constitutional responsibility for schooling, the Commonwealth, non-government school authorities and all those who seek the best possible educational outcomes for young Australians, to improve the quality of schooling nationally.

The achievement of these common and agreed national goals entails a commitment to collaboration for the purposes of:

- further strengthening schools as learning communities where teachers, students and their families work in partnership with business, industry and the wider community
- enhancing the status and quality of the teaching profession
- continuing to develop curriculum and related systems of assessment, accreditation and credentialling that promote quality and are nationally recognised and valued
- increasing public confidence in school education through explicit and defensible standards that guide improvement in students' levels of educational achievement and through which the effectiveness, efficiency and equity of schooling can be measured and evaluated.

These national goals provide a basis for investment in schooling to enable all young people to engage effectively with an increasingly complex world. This world will be characterised by advances in information and communication technologies, population diversity arising from international mobility and migration, and complex environmental and social challenges.

The achievement of the national goals for schooling will assist young people to contribute to Australia's social, cultural and economic development in local and global contexts. Their achievement will also assist young people to develop a disposition towards learning throughout their lives so that they can exercise their rights and responsibilities as citizens of Australia.

# National Goals

## **1. Schooling should develop fully the talents and capacities of all students. In particular, when students leave schools they should:**

- 1.1 have the capacity for, and skills in, analysis and problem solving and the ability to communicate ideas and information, to plan and organise activities and to collaborate with others
- 1.2 have qualities of self-confidence, optimism, high self-esteem, and a commitment to personal excellence as a basis for their potential life roles as family, community and workforce members
- 1.3 have the capacity to exercise judgement and responsibility in matters of morality, ethics and social justice, and the capacity to make sense of their world, to think about how things got to be the way they are, to make rational and informed decisions about their own lives and to accept responsibility for their own actions
- 1.4 be active and informed citizens with an understanding and appreciation of Australia's system of government and civic life
- 1.5 have employment related skills and an understanding of the work environment, career options and pathways as a foundation for, and positive attitudes towards, vocational education and training, further education, employment and life-long learning
- 1.6 be confident, creative and productive users of new technologies, particularly information and communication technologies, and understand the impact of those technologies on society
- 1.7 have an understanding of, and concern for, stewardship of the natural environment, and the knowledge and skills to contribute to ecologically sustainable development
- 1.8 have the knowledge, skills and attitudes necessary to establish and maintain a healthy lifestyle, and for the creative and satisfying use of leisure time.

## **2. In terms of curriculum, students should have:**

- 2.1 attained high standards of knowledge, skills and understanding through a comprehensive and balanced curriculum in the compulsory years of schooling encompassing the agreed eight key learning areas:
  - the arts
  - English
  - health and physical education
  - languages other than English
  - mathematics
  - science
  - studies of society and environment
  - technologyand the interrelationships between them
- 2.2 attained the skills of numeracy and English literacy; such that, every student should be numerate, able to read, write, spell and communicate at an appropriate level
- 2.3 participated in programs of vocational learning during the compulsory years and have had access to vocational education and training programs as part of their senior secondary studies
- 2.4 participated in programs and activities which foster and develop enterprise skills, including those skills which will allow them maximum flexibility and adaptability in the future.

## **3. Schooling should be socially just, so that:**

- 3.1 students' outcomes from schooling are free from the effects of negative forms of discrimination based on sex, language, culture and ethnicity, religion or disability; and of differences arising from students' socio-economic background or geographic location
- 3.2 the learning outcomes of educationally disadvantaged students improve and, over time, match those of other students
- 3.3 Aboriginal and Torres Strait Islander students have equitable access to, and opportunities in, schooling so that their learning outcomes improve and, over time, match those of other students
- 3.4 all students understand and acknowledge the value of Aboriginal and Torres Strait Islander cultures to Australian society and possess the knowledge, skills and understanding to contribute to and benefit from, reconciliation between Indigenous and non-Indigenous Australians
- 3.5 all students understand and acknowledge the value of cultural and linguistic diversity, and possess the knowledge, skills and understanding to contribute to, and benefit from, such diversity in the Australian community and internationally
- 3.6 all students have access to the high quality education necessary to enable the completion of school education to Year 12 or its vocational equivalent and that provides clear and recognised pathways to employment and further education and training.



# Part A

literacy, numeracy,  
indigenous education,  
science, the arts

## Highlights

australia's future depends  
each citizen having the need  
knowledge, understanding  
and values for a productive  
rewarding life in an educated  
just and open society





# Chapter 1

## Highlights of 2000

The *National Report on Schooling in Australia 2000* presents a review of the progress of Australia's schools towards the achievement of the National Goals for Schooling in the Twenty-first Century. Highlights of progress during 2000 were:

- publication of the first set of assessments against national benchmarks for numeracy
- completion of the initial period of funding for vocational education in schools, during which major expansion occurred
- the generally excellent results of Australia's 15-year-old students in the Organization for Economic Co-operation and Development (OECD)-sponsored Program for International Student Assessment (PISA).

### Assessment against national numeracy benchmarks

The numeracy section of this report presents the results of the assessment of students in years 3 and 5 against national benchmarks for numeracy. This is the first year that this information has been available and it follows the introduction of similar reporting for reading in 1999.

Reporting against benchmarks is one of the elements of the National Literacy and Numeracy Plan, which was introduced by Australia's education ministers with the aim that no child should leave primary schooling without having attained appropriate levels of competence in both literacy and numeracy. The benchmarking process is part of a commitment by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) to report against agreed performance measures in areas identified as priorities.

The benchmarks represent the minimum acceptable standard of numeracy without which a student will have difficulty making sufficient progress at school. They have been developed with reference to current levels of achievement as demonstrated in national surveys and State assessment programs. There has been extensive consultation with stakeholders and with experts in the areas of numeracy and educational measurement. The benchmarks have been trialed in classrooms in all States and Territories.

Numeracy benchmarks have also been prepared for use with year 7 students and it is anticipated that future editions of this report will

contain the results of these assessments. The annual assessments will provide an opportunity to review progress over time.

Existing State-based programs were used for assessment against the national benchmarks. A nationally agreed procedure was developed to equate State and Territory tests and to ensure that reporting of student achievement data against the numeracy benchmarks was comparable.

The results for 2000 indicate that approximately 93 per cent of year 3 students and 90 per cent of year 5 students achieved the numeracy benchmark. Benchmark proportions vary across jurisdictions, with the degree of variation being greater in year 5 than in year 3. While there appears to be no significant variations in the average performance of boys and girls, the achievements of Indigenous students is significantly below that of non-Indigenous students.

### Vocational education and training (VET) in schools

In September 1996, the Australian National Training Authority (ANTA) Ministerial Council agreed that \$20 million of ANTA funds be allocated each year to vocational education and training in government and non-government schools. The funding was made available over the four years 1997–2000 to assist the development and delivery of programs contributing to the expansion of vocational education in schools.

This funding, together with other funding provided by the Commonwealth and the States and Territories, has contributed to a significant change in the post-compulsory arena, involving a rapid growth in student numbers participating in VET in Schools programs and extensive coverage by schools.

Some of the features of the significant growth of VET in Schools in 2000 are listed below:

- more than 153,000 students in years 11 and 12 were involved in VET in Schools courses in Australia – this represents an increase of more than 150 per cent on the number involved in the base year of 1996
- the increased number of students in VET in Schools was evident in most States and Territories, as well as in all sectors
- there were almost 2,000 schools delivering VET programs

- student enrolments were predominantly in the Tourism and Hospitality, Business and Clerical and Computing Industry Groups
- the number of annual student contact hours spent by students in VET in Schools programs exceeded 27 million
- in 2000, 38 per cent of all year 11–12 students were enrolled in a VET in Schools program. This compares with 16 per cent during the base year of 1996
- more than 81,000 students were involved in structured workplace learning
- school-based apprenticeships grew to almost 6,000, of whom more than 4,000 commenced in 2000.

## PISA 2000

Australia is a participant in the OECD PISA, a large-scale international assessment of the skills and knowledge of 15-year-old students. While the assessments have been developed primarily for OECD member countries, it is also possible for non-OECD countries to participate.

PISA assesses the performance of students in three domains: reading literacy, mathematical literacy and scientific literacy. The cycle of assessments commenced in the year 2000 and is scheduled to proceed in three-yearly intervals. Although all three domains are tested in each assessment, the major focus for 2000 was reading literacy. Mathematics literacy will be the major focus in 2003 and science literacy in 2006.

Following a trial survey in 1999, the main round of assessments for the first cycle of PISA took place during 2000. Some 30 countries took part, including USA, Canada, Japan, Korea and most western European countries. While testing took place in most northern hemisphere countries in the first half of the year, Australia's testing took place in July and August 2000, to ensure that students in all countries were at the same stage in their school year when testing occurred.

Approximately 6,000 15-year-old students in 230 schools, from both government and non-government sectors, from all States and Territories, participated in Australia. To allow for the availability of reliable data for each State and Territory, schools were over-sampled in the smaller States and the Territories. In addition, over-sampling of Indigenous students was undertaken in order to provide reliable results for this group.

In the reading literacy domain Australia had one of the highest percentages of students performing at the highest level, behind only New Zealand and Finland. In addition, there was a below-average proportion of students at the lowest levels. Nine per cent of Australian students were at Level 1 (the lowest level), compared with the OECD average of 12 per cent, while 3 per cent of Australian students were below Level 1, compared with the OECD figure of 6 per cent.

In each of the three aspects of reading that make up the combined reading literacy score, Australia performed very well internationally. In 'retrieving information' and in 'interpreting texts', only Finland had significantly higher mean scores, and in 'reflecting on and evaluating texts' Australia was significantly outperformed only by Canada.

While Australia's top students performed extremely well in reading literacy, Australia had one of the largest spreads in the middle half of the score range (that is, excluding the highest and lowest achieving quarters). This large spread in reading, when considered along with the 3 per cent who scored below Level 1, suggests that Australia may not be catering as well as it might for lower-achieving students.

Australia also did very well in mathematical literacy – only students in Japan scored significantly higher on average. Eight other countries, including Korea, New Zealand, Canada and the United Kingdom, had mean scores similar to Australia's, and a further 21 countries scored significantly lower.

In scientific literacy, Australian students on average were outperformed by students from only two other countries, Korea and Japan. Australia was placed in the next group of countries, seven in all, with similar mean scores, scoring on a par with the United Kingdom, Canada, New Zealand, Finland, Austria and Ireland. It is notable that Australia performed significantly better than the United States, Germany and most other European countries.

Australia gained the highest result of any country on an item calling for identification of evidence needed in an investigation. Including this item, Australian students were within five percentage points of the highest achieving country on five items in physics/chemistry, three in biology and two in earth/space.

The results from the PISA survey are discussed fully in the chapters on literacy, numeracy and science.



# Part B

literacy, numeracy,  
indigenous education,  
science, the arts

## Context of Australian Schooling

australia's future depends  
each citizen having the need  
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## Chapter 2

# The context of Australian schooling

## Responsibilities for schooling in Australia

During 2000, schooling was provided to slightly fewer than 3.25 million students (see Table 4 in Appendix 1: Statistical annex) in approximately 9,600 institutions (see Table 2 in Appendix 1: Statistical annex) distributed throughout each of Australia's States and Territories. Under the Australian Constitution primary responsibility for school education is held by State and Territory governments, all of which provide and manage government schools as well as supporting non-government schools.

Government and non-government schools operate under the direct responsibility of the relevant State or Territory minister. Most non-government schools have some religious affiliation, most commonly with the Catholic Church – 19.8 per cent of all students and 64.2 per cent of non-government students were enrolled in Catholic schools in 2000. (See Glossary for Affiliation of non-government schools.)

Within each State and Territory, ministers, departments, statutory authorities and individual schools (particularly in the case of non-government schools) determine policies and practices in such matters as curriculum, course accreditation, student assessment and certification, resource allocation and utilisation, and teacher employment and professional development.

The Commonwealth government, through the Department of Education, Training and Youth Affairs (DETYA), works with the States and Territories to secure better educational outcomes from schooling. It does this by providing financial support for education systems, schools and students and through expanding curriculum options in post-compulsory schooling to accommodate the interests and abilities of the full range of senior secondary students, including those in VET in Schools programs.

In addition, the Commonwealth has specific responsibilities for the provision of financial assistance to students and for Australia's international relations in education, and shared responsibilities for schooling in Australia's external territories of Christmas Island, the Cocos and Keeling Islands and Norfolk Island.

Government schools received the majority of their funding from State and Territory governments, while non-government schools received the majority of their government funding from the Commonwealth.

## The structure of Australian schooling

Schooling in Australia is compulsory for children between the ages of 6 and 15 (16 in Tasmania). However, the majority of children start school when they are younger than 6 and remain at school beyond the age of 15. In most States and Territories, children start full-time schooling at around the age of 5, when they enrol in a kindergarten or preparatory year. Commonly, the majority of these students will already have had some part-time school or preschool experience. After the preparatory year, primary education lasts for either six or seven years, depending on the State concerned (see Table 2.1). In 2000, there were approximately 1.9 million primary school students in Australia, 72.8 per cent of whom were enrolled in government schools.

Secondary schooling is available for either five or six years depending on the State (see Table 2.1). Students normally commence secondary school at about age 12. In 2000, there were approximately 1.34 million Australian secondary school students, 64.2 per cent of whom were enrolled in government schools. Most government schools are coeducational, but a significant number of non-government schools are single-sex schools.

**Table 2.1 Primary and secondary school structures by State and Territory, 2000**

School year level	NSW, Vic., Tas., ACT	SA, NT	Qld, WA
12	Secondary		
11			
10			
9			
8			
7	Primary		
6			
5			
4			
3			
2	Kindergarten (NSW, ACT) Preparatory (Vic., Tas.)	Reception (SA) Transition (NT)	
1			
Pre-year 1			

Some features of Australian schooling in 2000 were as follows:

- There were 9,595 schools in Australia, which represented a decline of 4.1 per cent since 1990. In the same period, the number of government schools fell by 529, while the number of non-government schools rose by 117.
- The number of special schools was 369, which represented a fall of almost 17 per cent from the 444 operating in 1990.
- There were 3.25 million full-time students in Australian schools. This represented an increase of 0.64 per cent on the number enrolled in 1999.
- The proportion of students enrolled in non-government schools continued to rise in all States and Territories other than Tasmania. In 2000, 30.8 per cent of students were enrolled in non-government schools compared to 30.3 per cent in 1999.
- The total number of full-time equivalent teaching and non-teaching staff employed in Australian schools was 284,479, which represented an increase of 2.97 per cent on 1999.
- There were 218,050 full-time equivalent teaching staff in Australian schools. This represented an average of 14.9 students per teacher in government schools, 16.1 in Catholic schools and 13.0 in independent schools.
- Females comprised 78.3 per cent of the teaching staff in primary schools and 54.4 per cent in secondary schools. This compares with 78.0 per cent and 54.1 per cent respectively in 1999.

## The Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA)

In June 1993, the Council of Australian Governments (COAG) amalgamated a number of ministerial councils in order to optimise coordination of policy making across interrelated portfolios. MCEETYA was the result of the merger of the Australian Education Council, the Council of Ministers of Vocational Education, Employment and Training (MOVEET) and the Youth Ministers Council.

MCEETYA was formally established in January 1994. Its members are the State, Territory, Commonwealth and

New Zealand ministers with responsibility for the portfolios of education, employment, training and youth affairs. Papua New Guinea and Norfolk Island have observer status.

MCEETYA's areas of responsibility are pre-primary education, primary and secondary education, vocational education and training, higher education, employment and linkages between employment and labour market programs and education and training, adult and community education, youth policy programs and cross-sectoral matters. MCEETYA works closely with the Ministerial Council on the Australian National Training Authority, which has a statutory responsibility in relation to certain aspects of vocational education and training.

MCEETYA's functions include:

- coordination of strategic policy at the national level
- negotiation and development of national agreements on shared objectives and interests (including principles for Commonwealth–State relations) in MCEETYA's areas of responsibility
- negotiations on the scope and format of national reporting on areas of responsibility
- sharing of information and collaborative use of resources towards agreed objectives and priorities
- coordination of communication with, and collaboration between, related national structures.

MCEETYA, which meets at least once a year, is chaired for a calendar year by each of the member governments. In 2000, the Commonwealth provided the Chair. The Chair in 2001 will be Victoria.

MCEETYA is supported by taskforces that are convened as needed for particular tasks. These taskforces have prescribed timeframes and reporting arrangements and are reviewed annually. MCEETYA is serviced by a small independent secretariat, which is located in Melbourne and funded by all member governments.

State, Territory and Commonwealth ministers with responsibility for schooling in 2000 were:

New South Wales	The Hon. John Aquilina, MP
Victoria	The Hon. Mary Delahunty, MLA
Queensland	The Hon. Dean Wells, MP
South Australia	The Hon. Malcolm Buckby, MP
Western Australia	The Hon. Colin Barnett, MLA

Tasmania	The Hon. Paula Wriedt, MHA
Northern Territory	The Hon. Peter Adamson, MLA
Australian Capital Territory	Mr Bill Stefaniak, MLA
Commonwealth of Australia	The Hon. Dr David Kemp, MP (Chair)

## The National Goals for Schooling in the Twenty-first Century

In April 1989, MCEETYA (then known as the Australian Education Council) met in Hobart and agreed to a set of national goals. In the preamble to these Common and Agreed National Goals for Schooling in Australia, the ministers advised:

The ten national goals for schooling form the basis for cooperation and collaboration between schools, States and Territories and the Commonwealth. They are intended as a set of objectives which will assist each school and each system in the development of specific objectives and strategies, including objectives and strategies in the areas of curriculum and assessment. The goals have been agreed by education ministers to guide their cooperative effort in enhancing schooling in Australia. Ministers look forward to future development and refinement of these goals in response to the changing needs of the community. The goals will be reviewed from time to time by the Australian Education Council, using consultative processes involving both government and non-government schools, parents, teachers and the community.

In 1997, MCEETYA agreed to a recommendation that there should be a review of the national goals, involving extensive consultation with all relevant sections of the Australian community. The review proceeded during 1998 and, in 1999, the ministers agreed to the adoption of a new set of goals, the National Goals for Schooling in the Twenty-first Century.

## The National Report on Schooling in Australia

The *National Report on Schooling in Australia* was first published for the 1989 school year and has been published for

each school year since. The decision to produce a national report was a direct result of the promulgation of the Common and Agreed National Goals for Schooling in Australia. The report was seen by ministers of the day as the means by which they would report to the Australian people on progress being made towards the achievement of the goals.

When, in 1999, MCEETYA endorsed the new set of national goals, it also:

- affirmed its commitment to national reporting of comparable educational outcomes
- agreed that the National Goals for Schooling in the Twenty-first Century would provide an appropriate framework for such reporting
- agreed that the following six areas from within the goals would provide a basis for the first stage of reporting:
  - literacy
  - numeracy
  - student participation and attainment
  - vocational education and training (VET) in schools
  - science
  - information and communication technology (ICT).

MCEETYA further directed that work commence on the development of performance measures for civics and citizenship and for enterprise and career education.

This edition of the National Report has been produced to reflect MCEETYA's intentions in relation to the revised national goals. As a result, as well as reporting generally on Australian school education, this report contains specific sections on each of the priority areas determined by MCEETYA.

Wherever possible, these chapters report against sets of performance measures to which MCEETYA has agreed. In cases where no such measures exist, the report describes progress made towards their development during 2000. In some cases proxy measures have been used because the performance measures are under development.

For the first time, the National Report is being published in both print and electronic formats. This has been done in order to make the information contained in the report available to as wide an audience as possible. This report also contains case

studies describing innovative educational practice in a number of priority areas.

## Chapter 3

# Resourcing Australia's schools

## Funding arrangements

State and Territory governments have primary responsibility for the provision and regulation of school education. The Commonwealth government provides supplementary funding. The overall effect of these arrangements as they applied in 2000 was that government schools received the majority of their funding from State and Territory governments, while non-government schools received the majority of their government funding from the Commonwealth. The regulatory role of the States and Territories means that they also provided resources for infrastructure such as curriculum support, assessment and certification, school and teacher registration and accreditation which benefited government and non-government schools.

During 2000, funding provided for the operation of Australia's school system comprised:

- recurrent funding provided by State, Territory and Commonwealth governments
- capital funds provided by State, Territory and Commonwealth governments
- fees, charges and levies paid by students and their parents or care-givers and
- private donations and income, including that derived from fundraising.

Details of the funding that applied during 2000 are provided in Tables 23–37 (Appendix 1: Statistical annex). For 1999–2000, the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) has moved to accrual financial reporting but to allow comparisons to be made with previous years, data is provided for 1998–1999 and 1999–2000 on both a cash and accrual basis.

## Funding of government schools

Under Australia's Constitution, State and Territory governments have primary responsibility for the provision of school education. All States and Territories operate government school systems and approximately 70 per cent of students attended these schools in 1999–2000, see Table 3 (Appendix 1: Statistical annex).

Tables 23 and 24 (Appendix 1: Statistical annex) show accrual expenditure by government education systems in 1998–1999 and 1999–2000. State and Territory governments spent \$16.5 billion in 1998–1999 and increased expenditure by 5.2 per cent to \$17.4 billion in 1999–2000. Note, however, that the data do not represent total government expenditure on school education and the exclusions are explained in the notes to the tables.

On a cash basis, Tables 25 and 26 (Appendix 1: Statistical annex) indicate that State and Territory governments spent more than \$14 billion on government school systems in the 1999–2000 financial year. This represents an increase of 7.4 per cent on the \$13.4 billion expended in the previous financial year. Again the data do not represent total government expenditure on school education and the exclusions are explained in the notes to the tables. A major difference between the accrual figures and the cash figures is that superannuation, payroll tax and long service leave provisions are excluded from the cash figures. States and Territories have, or have agreed, to move from cash accounting to accrual accounting, see Table 24 (Appendix 1: Statistical annex) but cash figures for this year have been provided to allow comparisons with previous years.

Table 3.1 shows the breakdown of the expenditure and indicates that 94.4 per cent was expended in-school and

**Table 3.1 Expenditure by government education systems, 1999–2000 financial year**

Area of expenditure	Level of expenditure (\$'000 – cash basis)	Percentage of total expenditure
<b>In-school expenditure</b>		
Salaries (teaching)	8,188,447	57.0
Salaries (non-teaching)	1,397,536	9.7
Non-salary costs	3,983,014	27.7
Subtotal	13,568,997	94.4
<b>Out-of-school expenditure</b>		
Salaries (non-teaching)	435,586	3.0
Non-salary costs	361,043	2.5
Subtotal	796,629	5.5
<b>Total</b>	<b>14,365,626</b>	<b>99.9(a)</b>

(a) Rounding errors account for the total not being 100.

Source: Table 25 (Appendix 1: Statistical annex)

## Per capita expenditure

Per capita expenditure on government schools has risen steadily over the last decade (see Table 3.2): there was a 56.4 per cent increase in total per capita funding between the financial years 1989–90 and 1999–2000, although most of this increase was due to indexation. However, the increase has not been uniform across the sectors. The increase in the primary per capita expenditure (70.8 per cent) greatly exceeded the increase in the secondary sector (54.3 per cent). The pattern of larger per capita increases in the primary area appears to be slowing. For Australia as a whole, increases in per capita expenditure between 1998–99 and 1999–2000 were very similar across primary and secondary (6.7 per cent for primary and 6.5 per cent for secondary). However, it is evident from Table 28 (Appendix 1: Statistical annex) that, while per capita expenditure in the primary area increased in all States and Territories in 1999–2000, in the secondary area it fell in three

jurisdictions (South Australia, Tasmania and the Northern Territory).

Table 3.2 would be enhanced by the provision of 'real terms' data that take account of the effect of inflation over time. However, it is difficult to provide such figures as there has been a change from a Schools Price Index to an Average Government Schools Recurrent Costs (AGSRC) factor during the time in question. Furthermore, there is no agreed, appropriate deflator that can be successfully applied to the raw data.

Non-government schools derive their income from fees and donations, and State and Commonwealth government grants. Table 32 (Appendix 1: Statistical annex) details this per capita income for 2000 and Table 3.3 provides a summary.

Further details of expenditure in the non-government sector are also available in Tables 30, 31 and 32 (Appendix 1: Statistical annex). Table 3.4 summarises the per capita expenditure.

**Table 3.2 Per capita expenditure on government schools, by level of education, 1989–90 to 1999–2000 (\$ – cash format)**

Financial year	Primary	Secondary	Total
1989–90	\$3,329	\$4,805	\$4,064
1990–91	\$3,712	\$5,206	\$4,305
1991–92	\$3,789	\$5,385	\$4,421
1992–93	\$3,965	\$5,649	\$4,625
1993–94	\$4,048	\$5,876	\$4,757
1994–95	\$4,165	\$5,772	\$4,783
1995–96	\$4,410	\$6,110	\$5,063
1996–97	\$4,686	\$6,447	\$5,365
1997–98	\$4,975	\$6,628	\$5,615
1998–99	\$5,331	\$6,961	\$5,962
1999–2000	\$5,687	\$7,416	\$6,358

Source: *National Report on Schooling in Australia 1990–2000*, see notes to Table 28 (Appendix 1: Statistical annex)

**Table 3.3 Non-government schools per capita incomes, by source, 2000**

Income source	Catholic schools		Independent schools	
	Per capita amount (\$)	% of total income	Per capita amount (\$)	% of total income
Commonwealth grants	3,290	52.4	2,182	24.8
State grants	1,235	19.7	1,069	12.2
Total government grants	4,525	72.1	3,251	37.0
Private income	1,754	27.9	5,546	63.0
Total	6,279	100.0	8,797	100.0

Source: Derived from data provided by Commonwealth DETYA

**Table 3.4 Non-government schools per capita expenditure, by affiliation, 1999–2000**

Affiliation	Per capita expenditure
Catholic	\$6,251
Independent	\$9,251

Source: Table 32 (Appendix 1: Statistical annex)

For Australia as a whole, and for all non-government schools, total State and Territory payments amounted to a per capita grant of \$1,175 per student (Table 32, Appendix 1: Statistical annex). This is an increase of approximately 4 per cent on the amount provided in the previous year and, in 2000, represented 16.4 per cent of the total income of non-government schools. As well as providing recurrent grants to non-government schools, most States and Territories provide funding to non-government schools, including capital and recurrent funding.

On 1 July 2000, Australia's 'New Tax System' was introduced. It introduced a number of changes, including the introduction of a goods and services tax (GST) to replace wholesale sales tax and certain other Commonwealth and State indirect taxes and duties. Previously schools had indirectly paid wholesale sales tax. With the introduction of the GST the Commonwealth's overall position is that all educational activities that are related to a school's curriculum are GST free. There was no overall reduction in Commonwealth grant funding due to the tax changes and Commonwealth grant payments to non-government schools were grossed up to take the GST into account. The GST Start-up Office provided the educational sector with approximately \$17 million to assist them in implementing the GST.

Commonwealth recurrent funding for government schools was provided through block grants calculated according to the numbers of students at each level of schooling. The rates for government schools in 2000 were \$450 per primary school student and \$664 per secondary school student. Additional recurrent funding of \$94 per primary student and \$136 per secondary student was available for eligible students with disabilities. Total Commonwealth funding for government schools (on a per capita basis) was approximately 26 per cent higher than the level provided in 1996.

Support for the recurrent costs of non-government schools was also provided on a per capita basis. Non-government

schools were classified into one of 12 funding categories according to need. Category 1 schools received the lowest level of per capita funding and Category 12 schools the highest. Additional recurrent funding is available for eligible students with disabilities in non-government schools, based on the difference between Category 12 and the school's funding category. Table 3.5 sets out grant levels for government and non-government schools in 1993 and 2000. Table 3.6 provides information on the number of non-government schools by affiliation and students who receive Commonwealth funding.

As indicated in Table 34 (Appendix 1: Statistical annex), the methodology for the payment of State and Territory grants varied between States, with some using the Commonwealth funding categories and others using different approaches. Recent changes to the methodology employed by the Commonwealth for allocating funding to schools will have significant implications for those States and Territories that use the existing Commonwealth funding categories.

**Table 3.5 Commonwealth per capita grants to schools, by sector, level of education and funding category, Australia, 1993 and 2000 (\$ estimated at final 2000 prices)**

	Primary		Secondary	
	1993	2000	1993	2000
<b>Government</b>	450	450	664	664
<b>Non-government</b>				
Category 1	595	595	943	943
Category 2	794	794	1,251	1,251
Category 3	993	993	1,450	1,450
Category 4	1,208	1,208	1,901	1,901
Category 5	1,398	1,468	2,035	2,131
Category 6	1,552	1,618	2,261	2,361
Category 7	1,706	1,772	2,487	2,588
Category 8	1,870	1,955	2,735	2,858
Category 9	1,996	2,212	2,923	3,234
Category 10	2,122	2,402	3,098	3,509
Category 11	2,252	2,608	3,285	3,807
Category 12	2,383	2,832	3,481	4,135

Source: Commonwealth DETYA: AGSRC applied to 1993 figures

**Table 3.6 Number of Commonwealth-funded non-government schools and students (FTE), by funding category and affiliation, selected years**

	Schools			Students		
	1996	1998	2000	1996	1998	2000
Category 1	61	62	61	54,984	54,349	54,778
Category 2	36	36	33	30,356	32,106	30,791
Category 3	99	96	76	57,362	57,049	51,263
Category 4	16	15	11	5,444	4,862	4,358
Category 5	28	25	21	7,721	7,223	5,546
Category 6	118	74	54	29,800	24,896	23,878
Category 7	48	56	37	10,449	12,260	10,293
Category 8	154	174	143	37,631	39,976	25,631
Category 9	98	122	138	40,350	49,934	61,443
Category 10	1,593	241	314	560,797	104,670	128,757
Category 11	174	1,606	1,639	71,256	560,505	584,391
Category 12	41	74	98	9,804	12,551	20,173
Total	2,466	2,581	2,625	915,952	960,382	1,001,302
<b>Systemic schools</b>						
Catholic	1,557	1,558	1,571	536,252	549,416	568,311
Independent	156	166	183	35,510	45,782	59,104
Subtotal	1,713	1,724	1,754	571,761	595,198	627,415
<b>Non-systemic schools</b>						
Catholic	128	131	120	82,192	84,603	77,614
Independent	625	726	751	261,999	280,581	296,273
Subtotal	753	857	871	344,191	365,184	373,887
Total	2,466	2,581	2,625	915,952	960,382	1,001,302

(a) Data correct as at 5 February, 2001. Student numbers include part-time students.

(b) Where figures have been rounded discrepancies may occur between sums of the component items and totals.

Source: Commonwealth DETYA

## National expenditure on schooling

Table 29 (Appendix 1: Statistical annex) contains data calculated by the Commonwealth Department of Education, Training and Youth Affairs that shows that, in the financial year 1999–2000, 2.9 per cent of all government outlays was on primary and secondary education. This figure remained unchanged from the previous year, but has fluctuated during the decade from a high of 3.0 per cent in 1991–92 to a low of 2.6 per cent in 1997–98.

## Capital expenditure

Capital expenditure by State and Territory governments in government schools was in excess of \$800 million in 2000. As

Table 3.7 illustrates, this constitutes a sharp change in the level of capital expenditure, which had declined prior to 2000.

The Commonwealth allocated \$309.7 million in capital funding to Australian schools in 2000. This funding was made available through the Capital Grants Programme in the form of block grants for government and non-government schools. The purpose of the funding was to help improve educational outcomes for Australian students through the provision of better school facilities. Of the \$309.7 million made available in 2000, \$222.3 million was provided for projects at government schools and \$87.3 million for projects in non-government schools (including \$1.2 million for a national survey of non-government schools infrastructure). Table 3.8 provides a summary of Commonwealth capital funding.



**Table 3.7 Capital expenditure on government schools by State and Territory governments, 1996–97 to 1999–2000**

Financial year	Expenditure (\$m)
1996–97	793.1
1997–98	701.1
1998–99	668.5
1999–2000	803.1

Source: *National Report on Schooling* 1996–1999. 2000 figures from Table 36 (Appendix 1: Statistical annex)

**Table 3.8 Summary of Commonwealth capital expenditure, all schools, 2000 (\$m)**

State/Territory	Expenditure <sup>(a)</sup>
New South Wales	104.0
Victoria	75.7
Queensland	56.5
South Australia	23.9
Western Australia	30.6
Tasmania	8.3
Northern Territory	3.5
Australian Capital Territory	5.9
Subtotal	308.4
National survey of non-government schools infrastructure	1.2
Total	309.6

(a) Does not include capital funding provided under the Special Education Non-government Capital Support Element.

Source: Commonwealth DETYA

In the government sector, the most common types of work undertaken and facilities provided through Commonwealth capital funding were the upgrading and/or provision of general-purpose classrooms, library, science and technology facilities, and staff administration and amenities areas.

In 2000, a number of projects funded by the Commonwealth were completed both physically and financially in Catholic schools. The most common types of work in both primary and secondary schools were the construction of new classrooms and specialist facilities such as libraries, science, vocational education and training and information technology facilities, staff facilities, and general learning areas.

In the independent sector, the capital projects completed physically and financially in 2000 included classrooms for primary and secondary schools; home economics, science, music,

drama, art, computer and language facilities; libraries; administration areas; and staff facilities.

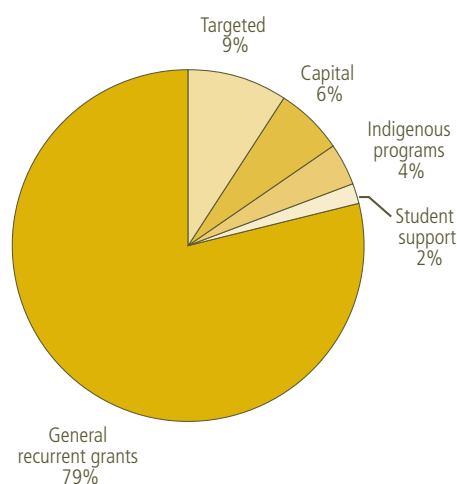
## Commonwealth funding

The Commonwealth seeks to enhance the outcomes of all school students by providing financial support for school education systems and schools through its general recurrent, capital and targeted funding programs. In 2000, the Commonwealth provided around \$4.96 billion for Australian schools and students. This comprised:

- \$3.91 billion for general recurrent grants (representing 79 per cent of specific-purpose Commonwealth funding for schools for the calendar year 2000)
- \$454 million for targeted programs (9 per cent), including \$217 million in grants for literacy and \$103 million for special education
- \$309.7 million for capital grants (6.3 per cent)
- \$192 million for Indigenous programs (4 per cent), including Indigenous Education Strategic Initiatives Programme (IESIP) and the Indigenous Education Direct Assistance Programme (IEDA)
- \$91.7 million for student support through Assistance for Isolated Children (AIC) and ABSTUDY (2 per cent).

Figure 3.1 shows the proportional breakdown of Commonwealth funding for schools and students by major programs.

**Figure 3.1 Commonwealth funding to schools and students, by program, 2000**



Source: Commonwealth DETYA

**Table 3.9 Commonwealth grants for schools, by program and category of school, by States and Territories, 2000 (cash expenditure) (\$000)**

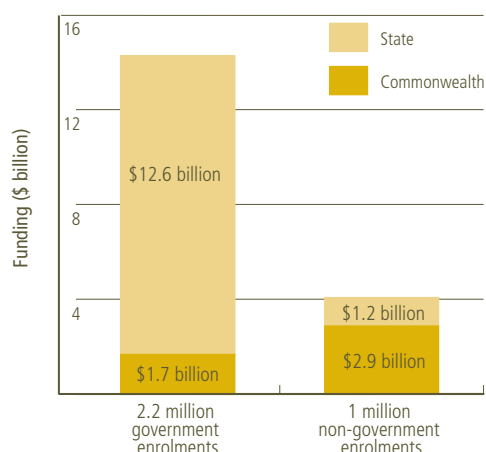
Program	NSW	Vic.	Qld	WA	SA	Tas.	ACT	NT	Australia
<b>Government schools</b>									
General Recurrent	385,903	281,704	230,083	125,513	91,178	34,691	20,675	15,108	1,184,855
Grants to Schools for Literacy	60,167	33,631	24,958	12,333	13,301	4,492	1,191	2,922	152,995
Students with Disabilities	3,504	2,013	1,421	753	1,180	317	119	477	9,784
ESL – New Arrivals	14,154	8,942	2,762	1,970	2,804	267	320	358	31,577
Special Education School Support	12,612	12,261	9,360	5,218	3,263	1,806	737	563	45,820
Country Areas	5,115	1,917	4,014	2,671	1,828	500	0	874	16,919
National Asian Languages and Studies in Australian Schools	6,728	4,587	3,874	2,183	1,600	563	342	259	20,136
Priority Languages Incentive	1,192	997	372	136	200	62	83	5	3,047
Community Languages	3,731	2,526	690	397	529	29	114	43	8,059
Capital	75,754	51,742	41,780	22,485	17,498	6,250	3,879	2,833	222,221
Indigenous Education Strategic Initiatives Programme	16,071	4,498	15,527	12,010	7,271	2,136	1,897	13,728	73,138
Total	584,931	404,818	334,841	185,669	140,652	51,113	29,357	37,170	1,768,551
<b>Non-government schools</b>									
General Recurrent (including STEA*)	899,020	722,225	500,199	264,947	202,381	54,654	58,627	24,285	2,726,338
Grants to Schools for Literacy	20,583	17,107	6,495	4,535	4,262	886	587	692	55,147
Students with Disabilities	4,408	3,133	1,003	563	1,415	188	255	42	11,007
ESL – New Arrivals	1,318	777	320	663	164	42	11	4	3,299
<b>Special Education</b>									
School Support	6,024	4,181	1,442	1,781	596	303	641	261	15,229
Centre Support	14,890	10,153	7,183	2,597	3,783	438	418	331	39,793
Centre Support – Capital	8	311	355	87	41	135	-	24	961
<i>Total Special Education</i>	<i>20,922</i>	<i>14,645</i>	<i>8,980</i>	<i>4,465</i>	<i>4,420</i>	<i>876</i>	<i>1,059</i>	<i>616</i>	<i>55,983</i>
Country Areas	1,152	531	697	355	225	108	-	106	3,174
National Asian Languages and Studies in Australian Schools	2,771	2,313	1,459	808	639	187	190	64	8,431
Priority Languages Incentive	571	833	352	207	213	45	46	8	2,275
Community Languages	1,137	4,194	413	194	166	6	120	-	6,230
Capital	28,542	24,341	14,863	8,228	6,577	2,106	2,018	725	87,400
Indigenous Education Strategic Initiatives Programme	15,353	2,275	11,802	15,422	2,569	926	548	13,493	62,388
Total	995,777	792,374	546,583	300,387	223,031	60,024	63,461	40,035	3,021,672
<b>Joint programs</b>									
National Literacy Strategies and Projects	1,442	49	603	30	27	-	120	-	2,271
National Asian Languages and Studies in Australian Schools	20	-	-	-	-	-	-	-	20
Full Service Schools	2,613	1,901	1,806	734	773	539	441	374	9,181
Total	4,075	1,950	2,409	764	800	539	561	374	11,472
<b>All programs</b>									
Total	1,584,783	1,199,142	883,833	486,820	364,483	111,676	93,379	77,579	4,801,695

Note: Expenditure with respect to a certain program year may continue in relation to that year in future years.

\* Short Term Emergency Assistance

Source: Commonwealth DETYA (2000 program year cash expenditure as at 30 June 2000)

**Figure 3.2 Public funding for school education**



Source: Commonwealth DETYA

Of the \$4.78 billion of grants for schools spent under the *States Grants (Primary and Secondary Education Assistance) Act 1996* and the *Indigenous Education (Supplementary Assistance) Act 1989*, the government sector received \$1.77 billion and the non-government sector \$3 billion. A further \$10 million was spent on joint national programs benefiting both sectors. Table 3.9 shows how funding from the *States Grants (Primary and Secondary Education Assistance) Act 1996* and the *Indigenous Education (Supplementary Assistance) Act 1989* was distributed between government and non-government authorities, by State.

In 2000, as in each of the previous years, an adjustment payment was made to reflect movement in the level of the AGSRC. In the period 1996–2000, the AGSRC provided school sector supplementation of approximately 6 per cent per annum.

In 2000, the Commonwealth, in line with its focus on educational outcomes, continued its financial support for international studies of student achievement, in particular through the Organization for Economic Co-operation and Development's (OECD) Program for International Student Assessment (PISA) and the continuing work on the Third International Mathematics and Science Study (TIMSS).

The Commonwealth provided a total of \$85.7 million for a range of programs aimed at literacy, quality schooling, vocational education and Indigenous education under annual appropriations for 1999–2000. Table 3.10 provides details.

A total of \$192 million was provided for Indigenous education under IESIP and the IEDA Programme. IESIP expenditure is shown in Table 3.9 and IEDA expenditure is shown in Table 3.10 with other targeted program expenditure via annual appropriations.

In 1999–2000, a further \$91.7 million was provided as income support for school students under the AIC scheme and ABSTUDY (see Table 3.11).

The Commonwealth also provides direct assistance to students through the Youth Allowance. In 2000, Youth Allowance recipients aged 16 years and over represented some 30 per cent of all full-time secondary students.

**Table 3.10 Commonwealth expenditure on schools, annual appropriations, 1999–2000**

Grants and awards	Actual expenditure (\$'000)
Grants in Aid	1,037
Australian Students Prize	1,000
Curriculum Corporation	148
Asia Education Foundation	1,169
<b>General Recurrent</b>	
Hostels for Rural Students	320
<b>Literacy</b>	
Children's Literacy National Projects	559
<b>Quality Outcomes</b>	
Civics and Citizenship Education*	3,848
School Drug Education Strategy	3,992
Quality Outcomes – other	5,170
<b>School to Work</b>	
Vocational Education in Schools	4,342
<b>Indigenous Education</b>	
Indigenous Education Direct Assistance*	
ATAS	33,412
VEGAS	8,650
ASSPA	19,449
Framework for Open Learning*	2,578
<b>Total</b>	<b>85,674</b>

Note: Information is in accrual terms except for Curriculum Corporation and the Australian Students Prize (ASP), which is cash. ASP and Curriculum Corporation were capitalised at the end of 1998–99 and therefore did not record expenses in 1999–2000.

\* Cross-sectoral programs – not all funding is provided in respect of school education.

Source: Commonwealth DETYA

**Table 3.11 Commonwealth student assistance for school-aged students, 2000 (\$'000 actual)**

Support scheme	Expenditure
ABSTUDY	59,867
AIC	31,836
<b>Total</b>	<b>91,703</b>

Source: Commonwealth DETYA

## Enrolment Benchmark Adjustment (EBA) scheme

Adjustment to the general recurrent grant for government schools was also made in accordance with the EBA scheme. This is a mechanism by which adjustments are made annually to the share of government general recurrent grants for schools, based on the movement in the ratio of government students to non-government students.

The EBA is calculated at the end of each year following the student census to determine the actual drift in student enrolments in each State, compared to 1996. If the census shows an increase in the non-government school enrolment share for a particular State or Territory, this is translated into a notional saving to that State and 50 per cent of that amount is deducted from the Commonwealth grant to that State. In 2000, the total adjustment amounted to a reduction in Commonwealth funding to States and Territories of \$32.1 million, the majority of which (\$25.6 million) impacted on New South Wales. No adjustment was made to the grants to South Australia, Tasmania, Northern Territory and the Australian Capital Territory.

## Changes to Commonwealth schools legislation

In 2000, there were several major developments in relation to Commonwealth funding programs, notably the:

- introduction of structural reforms to targeted assistance programs to improve educational outcomes via the *States Grants (Primary and Secondary Education Assistance) Act 2000*
- simplification of funding arrangements through the *Indigenous Education (Targeted Assistance) Act 2000*
- implementation of the National Indigenous English Literacy and Numeracy Strategy (NIELNS) to improve outcomes for Indigenous students.

In December 2000, the *States Grants (Primary and Secondary Education Assistance) Act 2000* was passed by Parliament. The Act provides schools funding for the quadrennium 2001–04 and includes provision for a new approach to non-government schools funding from 2001, based on the socioeconomic status of school communities. Increases in general recurrent funding

for non-government schools will be phased in by 25 per cent annually so that they apply fully in 2004.

The new Act also provides new accountability provisions. All education providers are required, as a condition of Commonwealth funding from 2001, to make a commitment to the National Goals for Schooling in the Twenty-first Century. Education providers are also required, as a condition of funding, to commit to achieving any performance measures, including targets agreed to by MCEETYA, incorporated in the legislation. These commitments form part of the funding agreements between the Commonwealth and each provider. The accountability provisions of the new legislation are based on the premise that all schools – government and non-government – are equally accountable for the public funds they receive for the education of the children in their care.

From 2001, the new *Indigenous Education (Targeted Assistance) Act 2000* will operate on a quadrennial basis in line with the *States Grants (Primary and Secondary Education Assistance) Act 2000*. The Indigenous education legislation provides additional funding for supplementary education programs designed to assist education providers to improve educational outcomes for Indigenous students. The Commonwealth's commitment to school education and Indigenous education for the quadrennium 2001–04 is reflected in these Acts.

## Staffing Australia's schools

Details of the staffing levels in Australian schools during 2000 are available in Tables 18, 19, 20, 21 and 22 (Appendix 1: Statistical annex). See Glossary for explanation of FTE of staff.

Continuing the trend that has been apparent in recent years, total staffing increased in 2000. The increase over total staffing in 1999 was approximately 3 per cent, compared with a 3.8 per cent increase for the previous year. Teaching staff made up 76.6 per cent of the total staff and the increase in teaching staff in 2000 was approximately 1 per cent.

Recent changes to the patterns of resourcing schools have resulted in more favourable pupil–teacher ratios. Table 3.12 shows changes to the ratios within both primary and secondary schools in each sector. For all schools across Australia, the pupil–teacher ratio fell below 15:0 for the first time in 2000.

**Table 3.12 Full-time student teaching staff ratios, by sector and school category, Australia, 1995–2000**

Sector and category	1995	1996	1997	1998	1999	2000
Government primary	17.9	17.8	17.6	17.6	17.0	17.1
Government secondary	12.5	12.7	12.7	12.7	12.5	12.4
Catholic primary	20.1	20.0	20.0	19.9	19.4	19.1
Catholic secondary	13.6	13.7	13.7	13.7	13.5	13.4
Independent primary	16.1	16.1	16.0	15.9	15.8	15.6
Independent secondary	11.7	11.7	11.6	11.6	11.5	11.4
All schools	15.4	15.4	15.3	15.3	15.0	14.9

Source: *National Report on Schooling in Australia*, 1995–1999, 2000 data from *Schools Australia*

During 2000, there was considerable debate about the adequacy of the continuing supply of teachers for Australia's schools. This drew attention to the number of graduates from initial teacher-education courses. While there has been considerable fluctuation in the number of graduates over the period 1990–99, the number graduating in the later years of the decade was significantly less. For example, the number of graduates in the four years 1996–99 was more than 16 per cent less than the number in the four years 1990–93. Table 3.13 shows the number of graduates from 1997–2000.

**Table 3.13 Number of persons graduating from initial teacher-education courses, Australia, 1997–2000**

Year	No. of graduates
1997	9,790
1998	11,044
1999	11,208
2000	10,813

Source: DETYA; *National Report on Schooling in Australia*, 1997–1999, 2000 data Table 22 (Appendix 1: Statistical annex)





# Part C

literacy, numeracy,  
indigenous education,  
science, the arts

**Student Outcomes**

australia's future depends  
each citizen having the need  
knowledge, understanding  
and values for a productive  
rewarding life in an educational  
just and open society







## Chapter 4

# Meeting the national goals

## Objectives for Australian schooling

Australia first adopted a set of national goals for schooling in 1989 when education ministers from all States and Territories and the Commonwealth, meeting as the Australian Education Council, adopted the Common and Agreed National Goals for Schooling in Australia. The preamble made reference to the need to review the goals from time to time. As a result, the first update of the goals occurred in 1996 when the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) agreed to the addition of a new goal regarding literacy. The new goal was further amended to include numeracy, before a complete and major review of the goals was begun in 1998. Following a process of wide consultation, the review was completed in 1999 when MCEETYA endorsed the statement of Australia's National Goals for Schooling in the Twenty-first Century.

The national goals represent widespread agreement about the underlying and fundamental purposes for schooling in Australia. However, it is not unusual for authorities, systems and individual schools to identify particular objectives and priorities from time to time. These priorities, usually derived from the national goals, express the particular emphases that schools and systems wish to apply during the period in question. They may originate from government policy, from a particular set of beliefs or philosophy that underlies the school or system, or from a contract or agreement with the local community being served by the school.

## Reporting on the National Goals

At the same time as MCEETYA adopted the revised National Goals for Schooling in the Twenty-first Century, it:

- affirmed its commitment to national reporting of comparable educational outcomes
- agreed that the National Goals for Schooling in the Twenty-first Century provided an appropriate framework for such reporting

- agreed that the following six areas from within the goals would provide a basis for the first stage of reporting
  - literacy
  - numeracy
  - student participation and attainment
  - vocational education and training (VET) in schools
  - science
  - information and communication technology (ICT)
- directed that work commence on the development of performance measures for civics and citizenship and for enterprise education.

This section, together with the rest of the National Report, describes the progress that has been made in developing and reporting on key performance measures in each of the six areas nominated by MCEETYA. The report looks in detail at each of the nominated areas, while the chapter on Indigenous education looks at progress being made on meeting the national goals for Indigenous students.

## Developing performance measures

The development of key performance measures is being undertaken by the National Education Performance Monitoring Taskforce (NEPMT), which was established by the ministers. It has representation from education authorities in all States and Territories, the Commonwealth, and Catholic and independent schools, with observers from the Australian Bureau of Statistics and the Productivity Commission, and representatives from the Australian National Training Authority (ANTA) and other MCEETYA taskforces.

It has been agreed that the key performance measures which it is developing represent:

A set of measures, limited in number and strategic in orientation, that provide nationally comparable data on aspects of performance critical to the monitoring of progress against the National Goals for Schooling in the Twenty-first Century.

Throughout 2000, considerable progress was made, although the stage of development reached varied across areas.

In the case of literacy, the development of benchmarks as key performance measures has been underway for some time and the *National Report on Schooling in Australia 1999* published the results of assessment in reading in both years 3 and 5. The literacy section of this year's report includes 2000 benchmark achievement data for students from years 3 and 5 in reading.

Previous editions of the *National Report on Schooling in Australia* have been unable to report nationally comparable outcomes in numeracy, as the development of benchmarks had not been finalised. However, the numeracy section of this edition contains the results of performance against the national benchmarks for students from years 3 and 5.

Earlier reports have presented a number of sets of data in the areas of student participation, retention and completion. However, there has been considerable debate about the extent to which these data constitute appropriate performance measures for making judgements about progress towards the national goals in this area. As a result, the NEPMT was charged with the task of reviewing these measures with a view to developing more suitable key performance measures.

The progress made is outlined in the section on student participation and attainment. Ministers have given in-principle agreement to the proposals and work is in hand to produce data for the new measures. This edition of the National Report presents data for the proposed measures where they are available. In some cases interim measures have been reported because data for the recommended measures are unavailable.

While national measures for VET in Schools (VETIS) are being settled data have been collected for some measures for a number of years, and it is now possible to detect national trends and to use this analysis for future policy development.

In the areas of science and information and communication technology, nationally comparable performance data are restricted to data on science from international studies such as the Program for International Student Assessment (PISA) and the Third International Mathematics and Science Study (TIMSS). The NEPMT has been investigating the identification and development of suitable performance measures and, in each area, major progress was made during 2000. The details of this progress and the position reached by the end of 2000 are outlined in the relevant sections.

## Performance measures in enterprise education

At the MCEETYA meeting in March 2000, ministers referred the key performance measures developed by the VETIS Taskforce proposed for the VETIS priority area to the NEPMT for review and refinement against the endorsed definition of national key performance measures.

## Performance measures in civics and citizenship education

The national goals require that students be active and informed citizens with an understanding and appreciation of Australia's system of government and civic life. In 1999, MCEETYA noted the need to develop indicators of performance for civics and citizenship education.

Having endorsed the paper *Conceptualising Civics and Citizenship Education* as the general curriculum basis for its work, the civics and citizenship education advisory group of the NEPMT began consideration of a two-stage process for the development of key performance measures as the basis for nationally comparable reporting of student outcomes.

The first stage will involve the collection of information on what can be expected of students in late primary and late compulsory schooling and the development of draft key performance measures to monitor student learning outcomes. The second stage will involve the trialing of these measures in order to validate them before recommending a full national sample assessment.

## Developments in relation to national targets

When ministers established the NEPMT, one of the terms of reference it was given was:

to identify areas where it may be appropriate to establish national targets or benchmarks, in relation to the agreed key performance measures which assist state and school level planning and reporting for improvement.

The NEPMT began its consideration of this issue within the broad framework provided by the national goals. A Performance Indicator Framework (PIF) sub-group was established and given responsibility for developing advice on establishing national targets or

benchmarks. A consultant was commissioned to identify an appropriate definition for targets in an educational setting, to review the literature on the efficacy of target-setting approaches and to describe examples of targets in school education. The PIF group then reviewed this research and from members' experience with target setting in their own jurisdictions, established the following definition:

A target is a measurable level of performance expected to be attained within a specified time.

The PIF group considered that, if targets were to be a useful strategy for improvement, all parties involved would need a shared understanding of the conditions required for successful target setting and began work on establishing the conditions for the effective setting of national targets.

The PIF group also determined that there were gaps in the research base surrounding targets and their use. In particular, it was noted that further research work needs to be undertaken to explore the impacts of linking resource allocation to the achievement of targets and the effects on school and system improvement through the use of targets.

The NEPMT considered possible national targets and identified the potential for targets to be established for more of the national goals. However, each national goal has different characteristics and considerations for developing meaningful key performance measures. As key performance measures are finalised for each of the goals, consideration should be given to the appropriateness of establishing national targets.



# Chapter 5

# Student participation and attainment

## Background

During the last two decades the types and levels of student participation in compulsory schooling in Australia have remained relatively stable. This is in stark contrast to the pattern of student participation in the transition phase from school to work, where there have been extensive and highly significant changes. A number of factors have contributed to this phenomenon, which is possibly the most significant development in Australian education in recent times.

## Education and training to support Australia's economy

There has been a growing recognition that the strength of the Australian economy is inextricably linked to the quality of education and training. *Skills for Australia*, published in 1987, highlighted the need for Australia to become a highly competitive trading nation with an industry base characterised by high levels of productivity, innovation, technology and workplace skills. The report went on to acknowledge that:

Education and training will play a vital role in productivity performance, directly conditioning the quality, depth and flexibility of our labour force skills.

During the last two decades of the twentieth century, it became clear that this vision would not be realised without extensive changes to the school and training systems, as well as to the transition process of young people from one to the other and from education/training to work.

Furthermore, it is clear that the trends identified in *Skills for Australia* have become well established and Australian industries and their workers are in an environment of increasing levels of globalisation, with rapid advances in information and communication technology. The need for a highly skilled workforce supported by an education and training system that can meet their rapidly changing needs has never been greater. The *Ministerial Review of Post Compulsory*

*Education and Training Pathways in Victoria*, published in August 2000, noted:

Australian enterprises can compete in world markets – it requires vision, a careful reading of what the opportunities are and the capacity to learn from past mistakes. Post compulsory education in Victoria faces the same challenges of how to operate in a rapidly growing world economy.

## The link between employment and level of education

During the same period, there has been a growing body of research linking high levels of education and training to high levels of employment and, conversely, low literacy levels and early school leaving to high risk of unemployment. These findings remain very significant as youth unemployment levels continue to be higher than unemployment levels for other age groups. The 1994 report *Working Nation* observed:

Young people often leave school early because they missed out on attaining the levels of literacy needed to cope with the demands of school. There is a strong relationship between low levels of literacy and high levels of unemployment and other forms of social disadvantage.

The same relationship has been identified in a number of more recent studies, including the Australian Council for Educational Research's *Longitudinal Survey of Australian Youth*, the most recent report of which was published in October 2000. Recognition of the link between early school leaving and social, economic and employment disadvantage had prompted considerable efforts to keep students in school. However, it was also apparent that school retention needed to be linked to viable processes of transition into work and/or further education and training.

## Transition from school to work

In 1991, the Australian Education Council published the report *Young People's Participation in Education and Training*. The report advocated sweeping reforms to the education and

training systems and, in particular, called for a much better understanding of the links between vocational and general education. Fundamental to these reforms was the notion of much greater flexibility in the pathways available to students as they moved from school to work and further education and training.

Among the strategies used to achieve the greater flexibility were:

- provision of the opportunity to move between school, work and training with maximum credit
- implementation of a system of nationally credentialed, competency-based training
- establishment of processes of credit transfer and articulation between school and TAFE
- provision of opportunities for students to undertake vocational education and training as part of their senior secondary studies at school.

The steady implementation of these and other reforms during the recent past has produced major changes to the manner in which senior secondary students participate in education and training.

Reform of the training sector of Australian education has been overseen by the Australian National Training Authority. Established in 1994, the authority has also given close attention to the transition between school and further education and training. Significant developments have been in the implementation of traineeships as a transition pathway in a number of industries. The introduction of part-time school-based New Apprenticeships, which allow students to begin New Apprenticeships while they are still enrolled at school, has added a significant dimension to the transition process.

## Development of performance measures

The State, Territory and Commonwealth ministers of education meeting as the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) in Adelaide in April 1999 agreed to a set of National Goals for Schooling in the Twenty-first Century.

To enable the adequate monitoring and reporting of progress towards the achievement of these goals, MCEETYA gave the National Education Performance Monitoring Taskforce (NEPMT) the task of developing key performance measures for national reporting in a number of areas.

Goal 3.6 of the National Goals for Schooling in the Twenty-first Century relates to student participation, retention and completion/attainment:

Schooling should be socially just so that:

all students have access to the high quality education necessary to enable the completion of school education to year 12 or its vocational equivalent and that provides clear and recognised pathways to employment and further education and training.

The nature of this goal means that the scope of reporting achievement in this area needs to extend beyond the boundaries of schooling to encompass the post-compulsory education and training system more generally, as well as entry to the labour market.

The NEPMT formed the view that the measures that have been used to date do not provide appropriate information about trends in student participation, retention, transition and completion/attainment. In particular, there was concern that traditional statistical collections do not adequately reflect current developments in education, including:

- closer integration between general and vocationally-specific education programs
- introduction of flexible pathways to enable students to obtain education and training qualifications with seamless pathways from one qualification to another
- introduction of certification arrangements which are more portable between different learning environments and sectors
- recognition that provision of lifelong learning opportunities is a major requirement for individuals to achieve ongoing employment within a rapidly changing labour market.

As a first step in overcoming these problems, the taskforce contracted consultants to develop a framework that would

provide a conceptual basis for developing nationally comparable measures of student participation, transition, retention and completion/attainment. It was intended that the framework would underpin the development of a statistical infrastructure to provide quality information that would enable nationally comparable reporting.

## Report from the consultants

The consultants worked under the supervision of a NEPMT sub-group, with whom they met on three occasions. The consultants also conducted a seminar with invited stakeholders in October 1999 and met with all key stakeholders during the course of the consultancy. They presented their draft report to the NEPMT meeting in December 1999. The following extract from the report outlines the major findings from the consultations with stakeholders.

### 1 The existing measures are not adequate

The existing measures are seen as disparate and not enabling a policy response. In particular, the apparent retention rate from the first year of secondary schooling to year 12 is seen to have little value, except for particular groups such as Indigenous students, for whom the differences from the Australian or State averages are so stark.

### 2 Leading indicators are needed to support policy action

Existing indicators focus at the end of secondary schooling and are seen as lagging indicators reflecting historic policies. For example, they are affected by schooling experiences many years prior to the students leaving school. Indicators of, for example, literacy levels while students are at primary school may be more useful for action to affect the students during their schooling.

### 3 New measures must have a clear purpose – improvement in the outcomes for all young people

New measures will need to lead to an understanding of what is happening to all young people, and not just those at school. They must enable a response at the school level and point the way forward for improvement.

### 4 The way people learn has changed

While the traditional pathways remain important there is a wider range of pathways through education, training and work. There are increased opportunities for learning opportunities outside formal institutions, and the use of alternative learning technologies is growing. It is no longer adequate to look at what is done in each sector independently or to ignore alternatives to institution-based learning. Measures need to be developed that reflect and monitor this changing environment.

### 5 Measures have multiple uses – political, resourcing and educational

These various uses can conflict and lead to second-best educational outcomes. There is a need for the measures to focus on the educational uses and the improvement of educational outcomes.

### 6 Consistency and comparability in the measures for States and Territories are required but league ladders are counter-productive

There is a need to have a national view and to provide for international benchmarking. Measures must take account of different systems and demographics. League ladders of the States and Territories are not seen as fostering improvement and can lead to a focus on trying to explain away 'poor' results rather than addressing problems.

### 7 There is a need to resolve differences in definitions and classifications across sectors of the education system

Work is being done in this area with the establishment of the Australian Qualifications Framework (AQF) and the release by the Australian Bureau of Statistics (ABS) of the Australian Standard Classification of Education (ASCED), which provides a consistent basis for statistics on both level and field of education. The establishment of the National Centre for Education and Training Statistics, and other consultancies commissioned by the taskforce, will also help resolve problems of data comparability.

- 8 The measures need to recognise all valued outcomes, not just the outputs of educational institutions

The interrelationship between structured learning, work and other forms of activity needs to be effectively represented in any new measures. Specification of what is a satisfactory outcome from schooling is complex. While for many young people a satisfactory outcome is successful completion of year 12 or entry to tertiary education, there are many who do not aspire to these outcomes and for whom an immediate satisfactory outcome is getting a job, even though it may possibly not be in their long-term best interests.

- 9 The measures need to quantify the numbers of young adults who are 'at risk'

If schools and other educational institutions are to be fully effective the numbers in these 'at risk' categories need to be minimised, and the risk factors better understood.

- 10 There is a need to look at what is happening within each single year of age within the 15–24 age range, and possibly older ages

From the end of compulsory schooling onwards young people are in increasingly diverse educational and labour market circumstances. The ability to understand this diversity and the chance to map movement between different circumstances will be lost if data are collected only for five- or three-year age groupings.

- 11 There is a need for a suite of related key measures that, in totality, will illuminate a complex pattern of behaviours and pathways

A very small number of measures, while having the attraction of simplicity, will not enable effective policy responses. The key measures could be supplemented by additional measures that could be used at the sector or school level. The measures need to be able to be applied to a range of demographic groups, including currently disadvantaged groups.

- 12 The measures need to reflect both static and dynamic views

They need to provide snapshots in time and also to demonstrate the extent of the interaction between

individuals and formal learning during the young adult years.

- 13 Schooling is only one of many influences on learning outcomes

Family background, socioeconomic status and geographic location are also important factors affecting an individual's capacity and willingness to extend learning. Measures that permit analysis of these factors are required.

- 14 Any change in performance measures must be economical and cost-effective

Existing instruments and administrative arrangements should be developed where possible. The advantages of any new additional measures must outweigh any additional costs.

The report also included a proposed conceptual framework, which the consultants believed should form the basis of the identification of the performance measures relating to student participation, retention and completion/attainment. The five key features of this framework are set out below.

- 1 The framework is person-centred rather than educational-institution-centred.
- 2 The persons concerned are all Australians aged 6–24 years.
- 3 The framework has three key stages:
  - compulsory schooling (ages 6–14)
  - transition from schooling (ages 15–19)
  - attainment and continuous learning (ages 20–24)
- 4 The performance measures for each of the key stages derive from the key policy questions for each stage. The key policy questions for each of the stages are:
  - Compulsory schooling: Are all children enrolled in and attending compulsory schooling?
  - Transition from schooling: What are young people in transition doing in relation to education and work? Are some of their activities unlikely to lead to satisfactory pathways to employment or further education and training?



- Attainment and continuous learning: What qualifications are being achieved by young adults? Are young adults continuing to participate in structured learning?
- 5 The measures of learning relate to structured learning, which could lead to a recognised qualification on completion of schooling.

## Endorsement by MCEETYA

The draft framework was accepted by the NEPMT and was presented to ministers at the MCEETYA meeting in March 2000. At that meeting, MCEETYA:

- approved the draft framework for developing key performance measures of student participation, transition, retention and completion/attainment as providing a conceptual framework for national reporting
- endorsed the following key performance measures for participation and attainment:
 

Participation

  - 1 the proportion of 15–19-year-olds, by single year of age, in full-time education or training, in full-time work, or in both part-time work and part-time education
  - 2 the proportion of 20–24-year-olds, by single year of age, in full-time education or training, in full-time work, or in both part-time work and part-time education and training

Attainment

  - 3 percentage of 19-year-olds who have completed year 12 successfully or attained a qualification at Australian Qualifications Framework (AQF) Certificate II or above
  - 4 percentage of 24-year-olds who have completed a post-secondary qualification at AQF Certificate III or above
- endorsed the NEPMT recommendation that the Australian Bureau of Statistics (ABS) be requested to develop, in consultation with education and training agencies and other data organisations:
  - a report containing as much of the required data as can be reasonably obtained from existing data sources

- a strategy for implementation of the proposed framework, including recommendations for refinement if appropriate, to be prepared for MCEETYA's consideration by 30 September 2000.

## ABS report

The ABS subsequently produced the report and strategy as requested by ministers. The report advised that some, but not all, of the agreed measures outlined above were available for immediate reporting. Where data for particular measures were not currently available, the report recommended that some proxy measures be used pending some changes to collection procedures that, if successful, would mean that the agreed measures would be available. In particular, the report advised that the following information would be available for reporting in this edition of the *National Report on Schooling in Australia*:

- Participation
  - agreed measures, by single year of age, and sex, for all States and Territories, for recent years up to and including 2000
  - agreed measures, by single year of age, sex and Indigenous status, for all States and Territories for 1996
- Attainment
  - proxy measures of attainment by sex for all States and Territories, for 1997 to 2000
  - proxy measures of attainment by sex, and Indigenous status, for all States and Territories for 1996.

## Performance measures for 2000

### Participation

This report uses the term 'full-time participation rate' to describe the endorsed key performance measure of participation. The full-time participation rate is the proportion of the population, at specific ages, that is in full-time education or training, or in full-time work, or in both part-time education or training and part-time work.

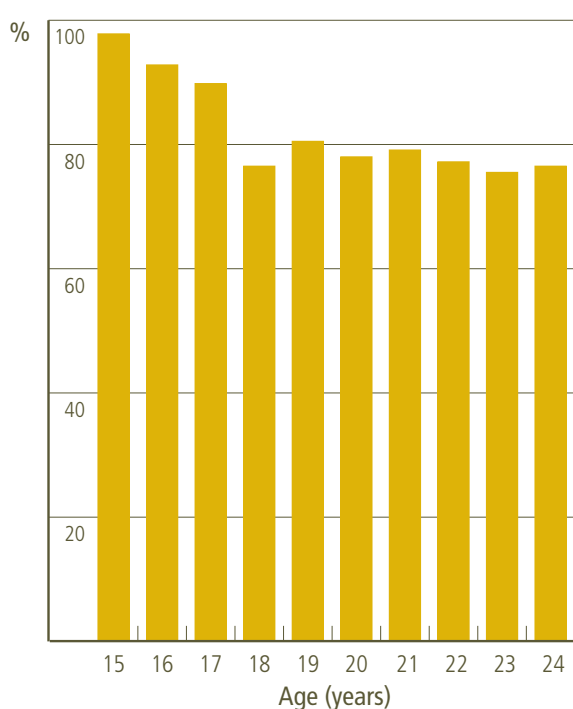
The participation rate for 18-year-olds is markedly lower than the rate for 15-year-olds, largely due to people either leaving school early after the compulsory years or completing year 12 (see Figure 5.1 and Tables 5.1–5.3).

This pattern is more pronounced for females than males, with the full-time participation rate for female 15-year-olds being 99 per cent, whereas the participation rate for 24-year-old females is 70 per cent. This compares to 97 per cent for 15-year-old males decreasing to 83 per cent at 24 years of age.

The lowest rates of full-time participation were at 23 years for females (69 per cent) and 18 years for males (79 per cent). For consecutive ages, the greatest decline in participation was between 17 and 18 years, with a drop of 11 per cent for males and 16 per cent for females. There were relatively few statistically significant differences between States and Territories in the rate of participation at each age group.

Changes in age-group participation over time are shown in Table 5.2. The table indicates that, while the distinction

**Figure 5.1 Full-time participation rates, Australia, May 2000**



Source: ABS, Cat. No. 6227.0 *Survey of Education and Work* (unpublished data), May 2000

between age groups has remained clear over the years, there has been no marked fluctuation for any one age group. The data in this table also indicate that the proportions participating in each of the age groups 17, 19, 20, 21, 22 and 24 were higher in 2000 than in any of the preceding years shown.

## Participation of Indigenous Australians

The data reported in the previous section are derived from the ABS *Survey of Education and Work*. However, the Survey does not separately identify Indigenous respondents, so participation measures for Indigenous people have been drawn from the ABS *Census of Population and Housing*. However, the following should be noted.

- The Census is conducted once every five years, and in 2000 the most recent was in 1996.
- While there is no sampling error, there is a non-sampling error, particularly that due to self-enumeration. For example, overall participation rates are somewhat lower from the Census than the *Survey of Education and Work*, where respondents are questioned by an interviewer.
- The concept of being Indigenous in the Census is measured by self-identification, and there may be some variation in the tendency to self-identify as Indigenous across ages and over time.

In 1996, the full-time participation rates of Indigenous people ranged from 75 per cent at 15 years to 35 per cent at 24 years, while the range for non-Indigenous people was from 95 per cent at 15 years to 70 per cent at 24 years.

The pattern of a marked lowering of the level of participation between the ages of 15 and 19 was evident to a greater extent for Indigenous young people than for their non-Indigenous counterparts. However, as Table 5.3 indicates, the difference between Indigenous and non-Indigenous people across age groups has lessened to some degree between 1986 and 1996. This general tendency is most apparent in the younger age groups where, for example, the 'gap' between Indigenous and non-Indigenous people fell by over three percentage points between 1986 and 1996.

**Table 5.1 Full-time participation rates, States and Territories, May 2000 (per cent)**

	Age (years)									
	15	16	17	18	19	20	21	22	23	24
NSW	98.1	93.4	91.1	73.8	80.0	80.0	79.8	82.0	77.8	76.2
Vic.	98.9	93.5	92.0	79.5	84.0	84.1	81.0	77.2	74.3	84.9
QLD	95.6	91.4	84.9	76.9	76.4	70.5	76.1	77.3	72.7	80.3
SA	98.4	94.5	90.0	77.7	78.3	77.0	78.2	76.1	73.4	58.8
WA	97.8	90.5	89.5	78.1	84.8	71.7	82.3	68.7	76.7	68.1
Tas.	99.0	91.1	88.6	67.5 <sup>(a)</sup>	78.9	74.9 <sup>(a)</sup>	66.0 <sup>(a)</sup>	53.3 <sup>(a)</sup>	63.3 <sup>(a)</sup>	56.5 <sup>(a)</sup>
NT	95.6 <sup>(a)</sup>	91.4	88.1 <sup>(a)</sup>	50.5 <sup>(b)</sup>	67.0 <sup>(b)</sup>	62.8 <sup>(a)</sup>	46.5 <sup>(b)</sup>	72.5 <sup>(a)</sup>	86.1 <sup>(a)</sup>	75.0 <sup>(a)</sup>
ACT	100.0	97.5	93.7	85.1	75.9 <sup>(a)</sup>	83.5	84.5	76.6	89.6	69.1 <sup>(a)</sup>
Aust.	97.8	92.8	89.8	76.5	80.5	78.0	79.1	77.2	75.5	76.5

Note: See Glossary for explanation of Relative Standard Errors.

(a) Relative Standard Error is greater than 10 per cent and less than 25 per cent.

(b) Relative Standard Error is 25 per cent or more.

Source: ABS, Cat. No. 6227.0 *Survey of Education and Work* (unpublished data), May 2000

**Table 5.2 Full-time participation rates, Australia, 1991–2000 (per cent)**

	Age (years)									
	15	16	17	18	19	20	21	22	23	24
1991	97.7	93.6	85.2	75.5	76.5	77.5	72.3	74.7	74.4	71.3
1992	97.1	93.2	82.5	76.9	74.2	76.3	71.4	70.0	71.2	70.1
1993	97.1	93.5	84.6	76.9	74.0	71.7	73.3	69.2	68.3	70.1
1994	96.8	91.3	87.3	72.4	73.2	73.8	69.3	69.1	73.7	73.8
1995	97.8	92.9	84.6	76.4	75.1	77.7	74.2	76.1	72.5	73.4
1996	96.4	93.7	87.0	74.2	75.7	77.2	74.4	73.9	76.6	71.8
1997	97.7	93.4	88.8	76.5	76.2	72.9	71.6	72.8	73.9	71.3
1998	96.1	92.2	86.6	77.1	77.0	75.2	75.3	73.1	75.1	73.7
1999	96.7	94.5	88.6	79.0	75.5	76.3	74.9	76.1	73.6	73.7
2000	97.8	92.8	89.8	76.5	80.5	78.0	79.1	77.2	75.5	76.5

Notes: Relative Standard Errors are less than 25 per cent.

See Glossary for explanation of Relative Standard Errors.

Source: ABS, Cat. No. 6227.0 *Survey of Education and Work* (unpublished data), May 1991–2000

**Table 5.3 Full-time participation rates, by Indigenous status and age, Australia, 1986, 1991 and 1996 (per cent)**

Year	1986		1991		1996	
Age	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
15	66.1	89.9	(a)	(a)	74.8	94.8
16	48.8	83.9	60.1	90.1	59.1	89.2
17	38.9	78.5	45.9	83.1	47.0	83.3
18	30.2	72.6	34.9	72.0	36.3	72.5
19	28.6	71.5	30.8	69.8	31.4	69.9
20	27.4	69.7	28.9	68.5	31.2	69.4
21	29.8	67.7	28.3	65.6	30.7	67.4
22	27.8	66.2	27.9	64.1	31.1	66.2
23	29.1	64.6	27.8	62.9	31.6	65.1
24	29.7	63.2	27.1	62.1	30.9	64.7

(a) These data have been excluded from the table due to a data anomaly in the 1991 census.

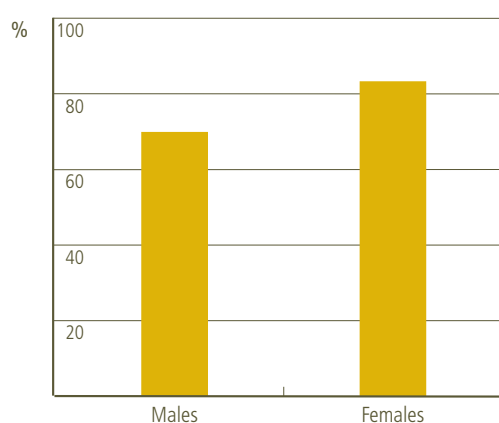
Source: ABS, *Census of Population and Housing*, 1986, 1991, 1996, unpublished data

## Attainment

This report provides data for two proxy measures of attainment from the ABS *Survey of Education and Work*:

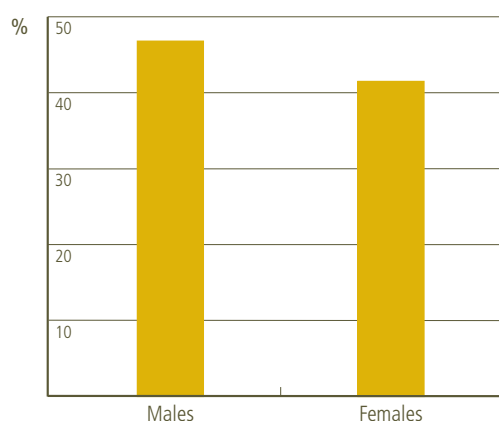
- percentage of 19-year-olds who have completed year 12 or obtained any post-school qualification
- percentage of 24-year-olds who have obtained a skilled vocational qualification or higher, as classified by the Australian Bureau of Statistics Classification of Qualifications (ABSCQ).

**Figure 5.2 Percentage of 19-year-olds who had completed year 12 or obtained any post-school qualification, by gender, Australia, May 2000**



Source: ABS, Cat. No. 6227.0 *Survey of Education and Work* (unpublished data), May 2000

**Figure 5.3 Percentage of 24-year-olds who had obtained a skilled vocational qualification or higher, by gender, Australia, May 2000**



Source: ABS, Cat. No. 6227.0 *Survey of Education and Work* (unpublished data), May 2000

Figures 5.2 and 5.3 show the differences in attainment by gender for both 19- and 24-year-olds and Tables 5.4 and 5.5 show the attainment for these age groups by State and Territory. Some caution needs to be taken when interpreting these data as the sampling process results in high volatility, particularly for the smaller States where the sample may be very small.

In 2000, 76 per cent of 19-year-olds had completed year 12 or obtained a post-school qualification. At the same time, 44 per cent of 24-year-olds had attained a skilled vocational qualification or higher. As is illustrated in Figures 5.2 and 5.3, while 82 per cent of 19-year-old females completed year 12 or post-school qualification compared to 70 per cent of males, the picture for 24-year-olds was very different, with 42 per cent of females attaining a skilled vocational qualification or above, compared to 47 per cent of males.

Caution needs to be taken when examining apparent differences between States and Territories as the ABS warns that the data are not sufficiently robust at fine levels of disaggregation (see Glossary for explanation of Relative Standard Errors).

Data showing changes to attainment over time for Australia are available from 1997 to 2000 and are presented in Table 5.6 and Figures 5.4 and 5.5.

**Table 5.4 Percentage of 19-year-olds who had completed year 12 or obtained any post-school qualification, by State and Territory, 1999 and 2000**

State/Territory	1999	2000
New South Wales	77	79
Victoria	83	75
Queensland	76	73
South Australia	69	66
Western Australia	74	80
Tasmania	49 <sup>(a)</sup>	67 <sup>(a)</sup>
Northern Territory	62 <sup>(b)</sup>	46 <sup>(b)</sup>
Australian Capital Territory	86	88
Australia	77	76

Note: See Glossary for an explanation of Relative Standard Errors.

(a) Relative Standard Error is greater than 10 per cent and less than 25 per cent.

(b) Relative Standard Error is 25 per cent or more.

Source: ABS, Cat. No. 6227.0 *Survey of Education and Work* (unpublished data), May 1999–2000

**Table 5.5 Percentage of 24-year-olds with skilled vocational qualification or higher, by State/Territory, 1999 and 2000**

State/Territory	1999	2000
New South Wales	46 <sup>(a)</sup>	47
Victoria	44	50
Queensland	39 <sup>(a)</sup>	45
South Australia	36 <sup>(a)</sup>	30 <sup>(a)</sup>
Western Australia	45 <sup>(a)</sup>	29 <sup>(a)</sup>
Tasmania	36 <sup>(b)</sup>	39 <sup>(a)</sup>
Northern Territory	19 <sup>(b)</sup>	37 <sup>(a)</sup>
Australian Capital Territory	59 <sup>(a)</sup>	51 <sup>(a)</sup>
Australia	43	44

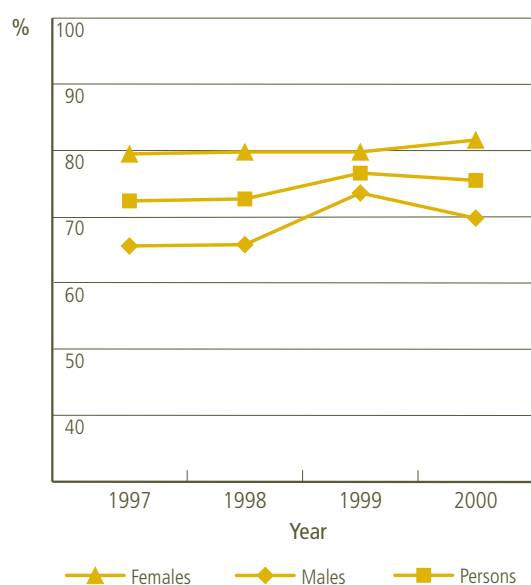
Note: See Glossary for an explanation of Relative Standard Errors.

(a) Relative Standard Error is greater than 10 per cent and less than 25 per cent.

(b) Relative Standard Error is 25 per cent or more.

Source: ABS, Cat. No. 6227.0 *Survey of Education and Work* (unpublished data), May 1999–2000

**Figure 5.4 Percentage of 19-year-olds who completed year 12 or obtained any post-school qualification, Australia, 1997–2000**



Note: Relative Standard Errors are less than 10 per cent. See Glossary for explanation of Relative Standard Errors.

Source: ABS, Cat. No. 6227.0 *Survey of Education and Work* (unpublished data), May 1997–2000

**Table 5.6 Educational attainment, by age group and level of qualification, Australia, 1997–2000 (per cent)**

19-year-olds who have completed year 12 or obtained any post-school qualification				
	1997	1998	1999	2000
Males	65.6	65.8	73.6	69.8
Females	79.5	79.8	79.8	81.6
Persons	72.4	72.7	76.6	75.5

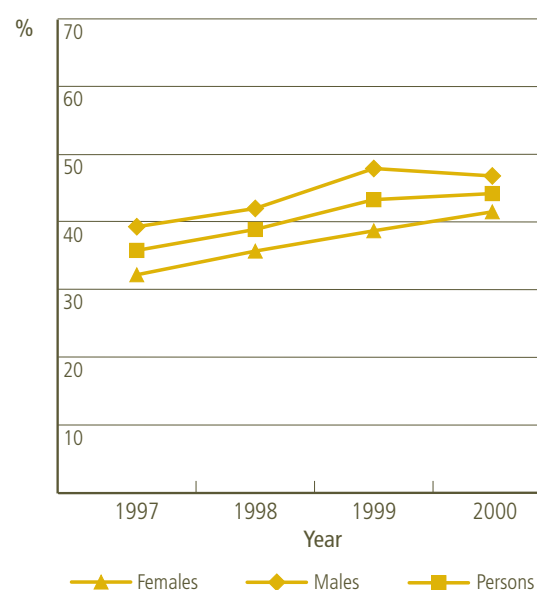
24-year-olds with a skilled vocational qualification or higher				
	1997	1998	1999	2000
Males	39.3	42.0	47.9	46.8
Females	32.2	35.7	38.7	41.5
Persons	35.8	38.9	43.3	44.2

Note: Relative Standard Errors are less than 10 per cent.

See Glossary for explanation of Relative Standard Errors.

Source: ABS, Cat. No. 6227.0 *Survey of Education and Work* (unpublished data), May 1997–2000

**Figure 5.5 Percentage of 24-year-olds who obtained a skilled vocational qualification or higher, Australia, 1997–2000**



Note: Relative Standard Errors are less than 10 per cent. See Glossary for explanation of Relative Standard Errors.

Source: ABS, Cat. No. 6227.0 *Survey of Education and Work* (unpublished data), May 1997–2000

**Table 5.7 Educational attainment by Indigenous status, Australia, 1991 and 1996 (per cent)**

	Males		Females		Persons	
	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous
<b>1996</b>						
19-year-olds still at school or left aged 17+	71.1	43.0	76.7	44.6	73.9	43.8
24-year-olds with skilled vocational qualification or higher	42.7	14.1	34.2	8.5	36.4	11.2
<b>1991</b>						
19-year-olds still at school or left aged 17+	60.1	34.3	65.6	39.0	62.8	36.6
24-year-olds with skilled vocational qualification or higher	35.9	10.6	23.5	4.7	29.7	7.5

Source: ABS *Census of Population and Housing*, 1986, 1991, 1996 (unpublished data)

## Attainment of Indigenous Australians

This report presents data collected in the 1991 and 1996 censuses, which include only 'post-school' qualifications, along with the age at which respondents left school, rather than a measure of whether school was completed. In Table 5.7, therefore, the category 'Completed year 12 or above' is replaced for 19-year-olds by the category 'Still at school or left aged 17+'.

Non-Indigenous people showed higher rates of attainment than Indigenous people, both in terms of 19-year-olds having stayed on at school to at least 17 years of age, and at the 'Skilled vocational qualification or higher' level at age 24. Table 5.7 indicates that, for both the Indigenous and non-Indigenous groups, the attainment levels were higher in 1996 than in 1991.

## Chapter 6

# Literacy student outcomes

## Overview

Commonwealth, State and Territory education ministers have made the improvement of literacy and numeracy standards an important national priority. The National Goals for Schooling in the Twenty-first Century, agreed to by all education ministers in April 1999, included the following national literacy and numeracy goal:

students should have attained the skills of numeracy and English literacy; such that, every student should be numerate, able to read, write, spell and communicate at an appropriate level.

All education ministers had agreed in 1997 to the National Literacy and Numeracy Plan, the aim of which was to ensure that all students attained at least the literacy and numeracy skills essential for progress in their schooling. Under the National Plan, ministers agreed to support:

- assessment of all students by their teachers as early as possible in the first years of schooling
- early intervention strategies for those students identified as having difficulty
- the development of agreed benchmarks for years 3, 5, 7 and 9, against which all students' achievement in these years could be measured
- the measurement of students' progress against these benchmarks using rigorous state-based assessment procedures, with all year 3 students being assessed against the benchmarks from 1998 onwards, and all year 5 students as soon as possible
- progress towards national reporting on student achievement against the benchmarks, with reporting commencing in 1999 within the framework of the annual *National Report on Schooling in Australia*
- professional development for teachers to support the key elements of the plan.

Also, education ministers agreed that benchmark standards should articulate nationally agreed minimum acceptable standards in literacy and numeracy at particular year levels, and be used for reporting on performance in support of the national literacy and numeracy goal.

Student achievement in literacy and numeracy is tested through existing state-based assessment programs. School authorities are utilising a nationally agreed equating process to locate the benchmark on the different tests. This will enable nationally

comparable reporting of aggregated performance data by States and Territories.

One strong argument for close monitoring of literacy levels in schools is the considerable body of research evidence linking low literacy levels to early school leaving. Early school leaving, in turn, appears to be strongly correlated to the risk of prolonged unemployment among school leavers.

## Measuring student achievement

At the March 2000 meeting of the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA), ministers approved the literacy and numeracy benchmarks for year 7 and the numeracy benchmarks for years 3 and 5, completing the development of nationally agreed performance standards for literacy and numeracy at years 3, 5 and 7. Ministers have agreed that benchmarking for years 9 or 10 be postponed pending findings from the Organization for Economic Co-operation and Development's (OECD) Program for International Student Assessment (PISA) project, which involves the collection of data from Australia and other countries.

In 2000, the 1999 year 3 reading benchmark results were published in a supplement to the *National Report on Schooling in Australia 1999*. This was the first time education authorities had reported nationally comparable data against the national literacy benchmarks. The 1999 *National Report on Schooling in Australia* also includes the 1999 year 5 reading benchmark results.

Implementation of the National Literacy and Numeracy Plan was a major feature of Australian schooling in 2000. The assessment and reporting elements of the plan were developed in a number of ways:

- Some system-level assessment programs expanded to include secondary students for the first time.
- There was a tendency to broaden the foci of some of the programs by including elements of literacy that had not previously been assessed.
- Many authorities provided schools with information about individual school performance in relation to that of like schools and communities, as well as in relation to State and national curriculum and achievement levels.
- Where systems had previously relied on sample testing, there was a tendency to move towards assessment involving whole cohorts.



- A number of systems reported the use of early assessment programs, which resulted in carefully planned intervention strategies.
- There was a significant increase in the number of non-government schools participating in programs designed to measure achievement against the national benchmarks.

All States and Territories cooperated with the Commonwealth in 1996 to conduct the first National School English Literacy Survey, the data from which were analysed and reported against a set of achievement scales constructed for the survey. The results were also reported against the levels of the English curriculum profile and for various sub-groups of the student population. However, as there were no comparable data from previous assessments, it was not possible to detect any change over time.

The process of reporting against the agreed benchmarks that was begun in 2000 will allow monitoring over time and will provide a clear picture of literacy and numeracy levels in Australia's schools.

## Literacy developments

Literacy intervention programs implemented to support the National Literacy and Numeracy Plan are determined at school and system levels. Nevertheless, there were many similarities in programs across the nation during 2000. For example, while the greatest level of intervention was in the early years of schooling, there was an increasing tendency to extend intervention programs into upper primary, and middle secondary schooling.

Similarities were also evident in the particular strategies used. A number of schools and systems reported extensive use of Reading Recovery; First Steps; Stepping Out; the Early Years Program; Children's Literacy Success Strategy (CLaSS); and Teaching Handwriting, Reading and Spelling Skills (THRASS). Many authorities also reported increasing use of more structured programs, such as the Spalding Method.

A common finding of the various assessment programs has been that a number of sub-groups are achieving at significantly lower levels than might be expected. This has resulted in the implementation of intervention programs targeted at particular groups. In particular, programs have been developed to address the learning needs of Indigenous students, students from low socioeconomic circumstances, students from language backgrounds other than English and students in rural and remote areas. In 2000, there was also significant effort to meet the learning needs of boys.

Other developments evident in 2000 were:

- the increasing use of electronic learning materials to assist in intervention programs
- the increasing use of analysis of the data from assessment programs to determine the level of resourcing and style of intervention required for schools and individuals
- the use of literacy teams to implement literacy plans developed at school, district, diocesan and state levels
- the involvement of parents and carers in a range of home-school liaison and support programs.

In 2000, National Literacy Week (NLW) was celebrated by the Commonwealth and State and Territory government and non-government education authorities. NLW focuses on literacy and numeracy in schools and showcases the significant work school communities are undertaking in this foundation area.

Important research programs provided information to schools and systems engaged in the choice of appropriate intervention programs. For example, the Successful Interventions Literacy Research Project conducted by the Australian Council for Educational Research (ACER) was completed in 2000. This two-year project involved secondary schools from all sectors in Victoria. It identified a number of intervention strategies that schools had found to be successful in improving students' literacy in the middle years.

Also in 2000, a sample of 15-year-old students from across the country took part in the OECD's PISA study which is aimed at assessing student knowledge, skills and attitudes in reading literacy along with mathematical and scientific literacy. More than 30 countries, mainly OECD members, took part in the study. PISA seeks to assess whether young people are able to apply their knowledge and skills to real-life problems and situations, rather than to assess whether they have absorbed a particular curriculum. Results are to be published in 2001.

## PISA 2000

Australia is a participant in the OECD's PISA. PISA is a large-scale, international assessment of the skills and knowledge of 15-year-old students that has been developed by the OECD. While the assessments have been developed primarily for OECD member countries, it is also possible for non-OECD countries to participate.

It assesses the performance of students in three domains: reading literacy, mathematical literacy and scientific literacy. The cycle of assessments commenced in the year 2000 and is

scheduled to proceed at three-yearly intervals. Although all three domains are tested in each assessment, the major focus for 2000 was reading. Mathematical literacy will be the major focus in 2003 and scientific literacy in 2006.

The term 'literacy' was adopted in order to reflect the breadth of knowledge, skills and competencies to be assessed. Reading literacy is considered to be more than just the ability to read and understand regular text. In PISA, reading literacy is defined as the ability to understand, use and reflect on written texts in order to achieve one's goals, to develop one's knowledge and potential and to participate effectively in society. To ensure that the assessment included reading situations from real life, the assessment material was not only continuous texts in the form of prose, newspaper articles etc., but also included schematics, maps, forms, tables and matrices.

In PISA 2000, reading literacy as the major domain took up two-thirds of the assessment time.

The additional time allocated to reading literacy enabled a more detailed assessment and deeper analysis of the results. In all, 141 assessment items were used. These were classified by text structure, reading aspect involved, text type and context and by the type of response required (which varied from short responses, simple multiple choice, complex multiple choice to open and closed constructed responses).

## Results

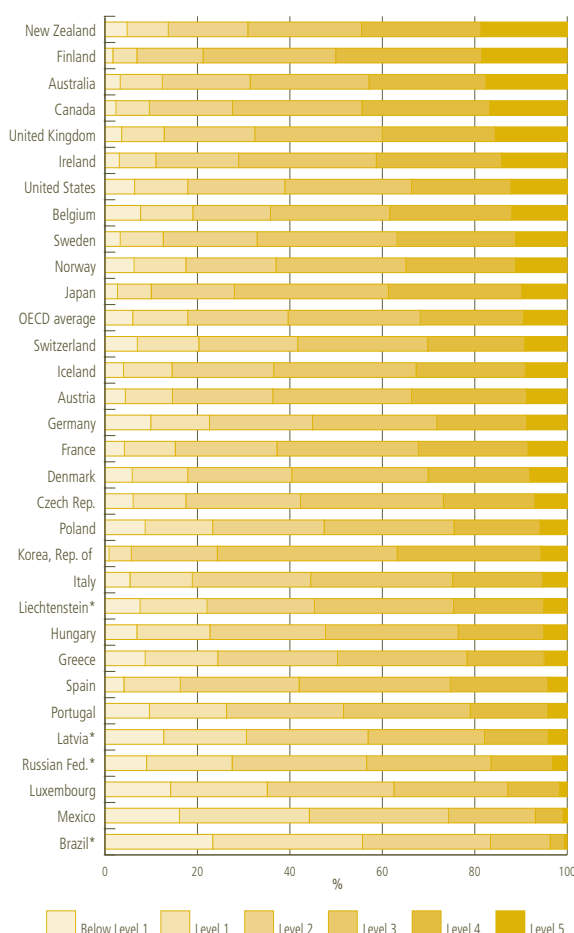
As well as reporting on reading literacy overall, it is possible to report on three different aspects of reading. These are how well students can (i) retrieve specified information, (ii) interpret what they read and (iii) reflect on and evaluate the texts drawing from existing knowledge. Scales were developed for each of these aspects as well as for reading literacy overall (the 'combined reading literacy' scale).

To assist in placing achievement on a continuum of the degree of difficulty, each scale was divided into five proficiency levels. At Level 5, the highest level, students can typically undertake extremely difficult and sophisticated reading, interpreting and evaluating tasks. At Level 1, by contrast, readers can only deal with the least complex reading tasks, such as finding explicitly stated pieces of information or recognising the main theme in a text on a familiar topic. Students performing below Level 1 are not even able to show routinely the most basic types of knowledge and skills that PISA seeks to measure.

## Internationally

Looking first at the results in terms of proficiency levels, Australia can be seen to have performed very well internationally. As Figure 6.1 indicates, Australia had one of the highest percentages of students performing at Level 5, behind only New Zealand and Finland. In addition, we had a below average proportion of students at the lowest levels. Nine per cent of Australian students were at Level 1 compared with the OECD average of 12 per cent while 3 per cent of Australian students were below Level 1 compared with the OECD figure of 6 per cent.

**Figure 6.1 PISA 2000 – Percentage of students at each proficiency level on combined reading literacy scale, by country**



\* Denotes non-OECD country.

Note: Countries are presented in descending order of the percentage of students reaching Level 5 on the combined reading literacy scale.

Source: Lokan, Greenwood and Cresswell, *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australia's Students?*, ACER 2001

**Table 6.1 PISA 2000 – Student achievement in overall reading literacy, by country**

Country	Mean score	Standard error
<b>Countries achieving significantly higher than Australia</b>		
Finland	546	(2.6)
<b>Countries with no significant difference from Australia</b>		
Canada	534	(1.6)
New Zealand	529	(2.8)
Australia	528	(3.5)
Ireland	527	(3.2)
Korea	525	(2.4)
United Kingdom	523	(2.6)
Japan	522	(5.2)
Sweden	516	(2.2)
United States	504	(7.0)
<b>Countries achieving significantly lower than Australia</b>		
Austria	507	(2.4)
Belgium	507	(3.6)
Iceland	507	(1.5)
Norway	505	(2.8)
France	505	(2.7)
<b>OECD average</b>	<b>500</b>	
Denmark	497	(2.4)
Switzerland	494	(4.2)
Spain	493	(2.7)
Czech Republic	492	(2.4)
Italy	487	(2.9)
Germany	484	(2.5)
Liechtenstein*	483	(4.1)
Hungary	480	(4.0)
Poland	479	(4.5)
Greece	474	(5.0)
Portugal	470	(4.5)
Russian Federation*	462	(4.2)
Latvia*	458	(5.3)
Luxembourg	441	(1.6)
Mexico	422	(3.3)
Brazil*	396	(3.1)

\* Denotes non-OECD country.

Source: Lokan, Greenwood and Cresswell, *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australia's Students?*, ACER 2001

In terms of scale scores, Australia was outperformed in reading literacy as a whole by only one country, Finland (see Table 6.1). Australia performed on a par with several other countries, including Canada, New Zealand, the United Kingdom and the United States. In each of the three aspects of reading that make up the combined reading literacy score, Australia performed very well internationally. In retrieving information and in interpreting texts, only one country (Finland) had significantly higher mean scores; in reflecting on and evaluating texts Australia was outperformed only by Canada.

While our top students are performing extremely well in reading literacy, Australia had one of the largest spreads in the middle half of the score range (that is, excluding the highest and lowest achieving quarters). This large spread in reading, considered along with the 3 per cent who scored below Level 1, suggests that we may not be catering as well as we might for our lower achieving students.

## State and Territory results

Table 6.2 shows how students in the States and Territories performed in reading literacy overall in terms of proficiency levels, compared with Finland as the top performing country and with the OECD average. The table shows that the percentages of students from the Australian Capital Territory, Western Australia, South Australia and New South Wales performing at Level 5 are equal to or greater than for Finland. Moreover, students in the Northern Territory performed at levels very similar to the OECD average.

Care should be taken in interpreting these data. No account has been taken of school intake or other relevant contextual variables, eg the impact of the skewed gender sample in Victoria's reading results is likely to be an underestimate of that State's performance.

In terms of scale scores (see Table 6.3), the data show that most of the States achieved equivalent results. The ACT's mean score was significantly higher than the mean scores in Queensland, Victoria, Tasmania and the Northern Territory, while the Northern Territory's mean score was significantly below those in all other States and Territories except Tasmania.

**Table 6.2 PISA 2000 – Proficiency levels on the combined reading literacy scale, by State and Territory (per cent)**

State	Proficiency levels					
Combined reading literacy scale	Below Level 1 (less than 335 score points)	Level 1 (335 to 407 score points)	Level 2 (408 to 480 score points)	Level 3 (481 to 552 score points)	Level 4 (553 to 625 score points)	Level 5 (above 625 score points)
Finland	2	5	14	29	32	19
ACT	3	8	15	25	26	25
NSW	3	5	17	25	29	18
WA	3	9	18	24	25	22
SA	4	8	17	26	27	19
Qld	5	10	20	25	24	16
Vic.	5	10	21	27	22	14
Tas.	9	10	17	25	25	16
NT	11	12	20	26	20	10
OECD average	6	12	22	29	22	10

Source: Derived from Figure 5.4 of Lokan, Greenwood and Cresswell, *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australia's Students?*, ACER 2001

**Table 6.3 PISA 2000 – Student achievement in overall literacy, by State and Territory**

			ACT	NSW	WA	SA	Qld	Vic.	Tas.	NT
Mean			552.2	538.8	537.9	537.0	521.0	515.9	514.1	488.6
SE			4.6	6.3	8.0	7.7	8.6	7.6	9.7	5.6
ACT	552.2	4.6		0	0	0	1	1	1	1
NSW	538.8	6.3	0		0	0	0	0	0	1
WA	537.9	8.0	0	0		0	0	0	0	1
SA	537.0	7.7	0	0	0		0	0	0	1
Qld	521.0	8.6	-1	0	0	0		0	0	1
Vic.	515.9	7.6	-1	0	0	0	0		0	1
Tas.	514.1	9.7	-1	0	0	0	0	0		0
NT	488.6	5.6	-1	-1	-1	-1	-1	-1	0	

1 = Average performance statistically significantly higher than in comparison State.

0 = No statistically significant difference from comparison State.

-1 = Average performance statistically significantly lower than in comparison State.

Note: Read across the row to compare a State's performance with the performance of each State listed in the column headings. So to compare NSW's performance, the reader needs to find it in the left hand column and then go across the row using the key above to compare with the States and Territories listed in the column headings. It will be seen that NSW shows no statistically significant difference from any State but performed significantly higher than the Northern Territory.

Source: Lokan, Greenwood and Cresswell, *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australia's Students?*, ACER 2001

## By student sub-group

The PISA reading literacy results by gender have reinforced existing concerns about the achievement of boys. Across all the countries that participated in PISA, boys were significantly outperformed, on average, by girls. Within Australia, the difference in reading achievement by gender was greatest in Queensland and Tasmania. Australian boys appear to have particular difficulty with continuous texts. Girls did better than boys in all aspects of the reading literacy assessment.

Relative to other countries, Australia's PISA results showed a moderately strong relationship between student socioeconomic status (SES) and achievement in reading literacy, this link being stronger than for either mathematical or scientific literacy. Despite the moderately strong relationship, it is evident that a large number of low SES students achieved very high scores and that some students with a high SES achieved very low scores.

There are clearly large average performance differences in reading literacy skills between Indigenous and non-Indigenous students, with Indigenous students having a mean score about one proficiency level lower than that for their non-Indigenous peers. Nevertheless, some Indigenous students performed very well, with 40 per cent reaching Level 3 or higher on the combined scale.

Students with English as their major language spoken at home generally did better than students from non-English speaking backgrounds in all aspects of reading literacy, while students from schools in remote areas tended to perform less well than students from cities and other urban areas.

## Other findings

In addition to the above student background variables which were related to achievement, a range of other home and school factors appear to have influenced the reading literacy achievement of Australian students. These factors include:

- home educational resources (access to dictionaries, text books and a quiet place to study)
- the amount of time spent on homework
- time spent reading for enjoyment
- students' perception of classroom discipline
- teacher enthusiasm
- the average student SES at the student's school.

## National literacy: teachers

Professional development for teachers is an integral part of the National Literacy and Numeracy Plan, as it is recognised that the classroom teacher is the major determinant of the literacy learning of students. During 2000, there was considerable professional development related to the assessment and intervention programs described above. In particular, teachers were assisted to interpret data from assessment programs and devise programs based on their findings.

Many teachers were involved in professional development programs associated with the introduction of particular intervention programs. As many schools had instituted literacy teams, a number of the professional development initiatives were directed towards the team leaders. A train-the-trainer approach was common in such programs.

Another professional development strategy was the establishment of literacy networks among teachers. The increasing use of modern communication technology contributed significantly to the extent and effectiveness of such strategies. Many authorities also provided opportunities for teachers to engage in postgraduate, accredited study in literacy teaching and learning.

## Reading benchmark results

In March 1997, all State, Territory and Commonwealth education ministers agreed on the following national goal:

every child leaving primary school should be numerate and be able to read, write and spell at an appropriate level.

To provide focus to this goal, ministers also agreed to a sub-goal that:

every child commencing school from 1998 will achieve a minimum acceptable literacy and numeracy standard within four years.

To help support the achievement of these goals, ministers agreed to the implementation of a National Literacy and Numeracy Plan, the essential features of which are:

- Early assessment and intervention for students at risk of not achieving minimum required standards.

- Development of national benchmarks for each of years 3, 5 and 7.
- Assessment of student progress against these benchmarks.
- National reporting of benchmark data.
- Professional development for teachers.

Since its formulation, education authorities in all States and Territories, assisted by the Commonwealth, have been engaged in implementing these elements of the National Plan.

## Student achievement against benchmarks

This section of the report describes the results of testing conducted during 2000 in which the achievement of students in each of years 3 and 5 was measured against the national benchmarks for reading. These results build on those published for 1999 and will eventually be accompanied by results for writing and spelling. Benchmarks for these further aspects of literacy are available, but the assessment processes for their measurement are still under development.

### The reading benchmarks

The benchmarks that underpin the reporting of student achievement describe nationally agreed minimum acceptable standards for literacy at particular year levels. That is, they represent the minimum acceptable standard of literacy without which a student will have difficulty making sufficient progress at school.

The benchmarks have been developed with reference to current levels of achievement as demonstrated in national surveys and State and Territory assessment programs. There has been extensive consultation with stakeholders and with experts in the areas of literacy and educational measurement. As well, the benchmarks have been trialed in classrooms in all States and Territories.

Because the benchmarks represent minimum acceptable standards, education ministers meeting as MCEETYA have determined that the national goal should be that all students will achieve at least the benchmark level of performance. Regular publication of benchmark results will enable them and others to monitor progress towards the attainment of that goal.

The standards described by the benchmarks for years 3, 5 and 7 represent increasingly demanding levels of proficiency against which the progress of students through school can be measured and followed. The benchmarks form three important markers along a continuum of increasing competence. The year 3 benchmark with the least demanding level of literacy is located in the early part of the achievement continuum, while the years 5 and 7 benchmarks, requiring more demanding understandings and skills, are at progressively higher levels. Students' locations on the achievement continuum can be estimated through the assessment procedures undertaken by the States and Territories.

Students who have achieved the year 3 reading benchmark can read and understand a range of texts that are suitable for this year level. These texts appear in, for example, picture books, illustrated chapter books, junior reference material and the electronic media. Typically, texts that these students are able to read use straightforward, everyday language and have predictable text and sentence structures. Words that may be unfamiliar are explained in the writing or through the illustrations.

When students read and understand texts like these, they can:

- identify the main purpose of the text (eg say that the purpose of a set of short simple instructions is to help you do something)
- identify a sequence of events in stories
- find directly stated information in the written text and/or illustrations
- make links between ideas stated directly and close together in different parts of a text (eg predict the end of a story; work out a character's feelings from an illustration; make links between a diagram and its label)
- work out the meaning of some unfamiliar phrases and words.

At the benchmark standard, year 5 students read and understand a range of texts that are suitable for this year level. These texts appear in, for example, chapter books, junior novels, junior reference material, magazines, newspapers and the electronic media.

Texts that these students are able to read may have:

- varied sentence beginnings (eg *After ploughing, the soil is raked and flattened*)

- a significant amount of new vocabulary, as long as this is explained by text and illustrations
- some long groups of words (eg *the largest planet so far discovered; a cute, well-trained dog; the edible seed of a type of pod-bearing plant*)
- some use of figurative language (eg *His legs were turning to rubber; The wire swung and bounced like a live thing*).

When students read and understand texts like these, they can:

- identify the main purpose of a text (eg choose a title for a text to highlight purpose)
- identify the main idea in a text
- identify the order of ideas and information in factual texts
- find directly stated information in the written text and/or illustrations
- make links between ideas in a text (eg link information from a heading, written text and diagram; work out a missing step in a set of instructions)
- work out the meaning of unfamiliar phrases and words (eg work out the meaning of some figurative language: *Her face was as white as a sheet*).

## The assessment process

All jurisdictions have in place State-based literacy monitoring programs. These programs are well established, understood and valued within the State educational communities and all States are keen to retain them. As well, they allow States and Territories to report (both publicly and to parents) on the range of performance demonstrated, including benchmark performance. As a result, ministers agreed that assessment against the national benchmarks should occur using the existing State-based programs.

A nationally agreed procedure was developed to equate State and Territory tests and to ensure that reporting of student achievement data against the literacy benchmarks was comparable. The committee that developed the procedure included several of Australia's leading educational measurement experts.

At each of years 3 and 5, equating the State and Territory tests is a three-stage process involving the construction of a common achievement scale for reading, determining the location of the

benchmark on the common achievement scale, and calculating equivalent benchmark locations on State and Territory achievement scales.

The common achievement scales are constructed from results of testing students from a representative sample of schools in each State and Territory using the assessments of other States and Territories.

To establish the location of the benchmark at each year level, expert judges are required to envisage a student who is just able to demonstrate the skills described in the benchmark and to estimate the probability of this minimally competent student succeeding on each test item. The judges used in the benchmarking were from all States and Territories and included a range of literacy specialists and classroom teachers who were qualified to make decisions about the likelihood of students succeeding on the test items.

In the final phase of equating, an equivalent benchmark location is calculated for each jurisdiction's reading test. All three aspects of the process contribute to enhancing the comparability of the separate State tests and to ensuring that any differences in State results are likely to be due to factors other than the tests.

## The results

Results of assessment against reading benchmarks were first published in the *National Report on Schooling in Australia: 1999*. Since that time a new method of calculating the national benchmark figures has been introduced to provide the most accurate picture of change in student achievement over time. The new methodology has been endorsed by the panel of measurement experts established to advise the benchmark committee and is the same as that used for a number of international assessment programs in which Australia is participating.

The change has affected only the 1999 Year 3 Reading and, for that reason, the revised 1999 Reading results are published in this edition of the National Report. The change has impacted similarly on all States and Territories and has been introduced to minimise fluctuations in results that are unrelated to changes in the achievements of students. The new methodology takes better account of the uncertainties associated with measuring student performance.



The data in Tables 6.4, 6.5 and 6.6 represent students who have achieved the benchmark as a percentage of the students participating in the State and Territory testing. The results reported here are for assessed students. This term has been used for students who sat the test and students who were formally exempted. Exempted students are

reported as below the benchmark and thus are included in the benchmark calculation. Students not included in the benchmark calculation are those who were absent or withdrawn by parents/care-givers from the testing and students attending a school not participating in the testing.

**Table 6.4 Percentage of year 3 students achieving the reading benchmark, by State and Territory, 1999 (revised)**

State/Territory 1 Average age <sup>(a)</sup> 2 Yrs of schooling <sup>(b)</sup>	Percentage of students achieving the benchmark	Percentage of male students achieving the benchmark	Percentage of female students achieving the benchmark	Percentage of Indigenous <sup>(c)</sup> students achieving the benchmark	Percentage of LBOTE <sup>(c)</sup> students achieving the benchmark
<b>New South Wales</b>	93.7	92.6	94.8	85.1	93.9
1. 8yrs 9mths	± 1.8	± 2.1	± 1.5	± 4.3	± 1.9
2. 3yrs 7mths					
<b>Victoria</b>	89.1	86.2	92.0	73.8	85.1
1. 8yrs 11mths	± 2.4	± 2.9	± 2.0	± 6.9	± 3.2
2. 3yrs 7mths					
<b>Queensland<sup>(d)(e)</sup></b>	85.8	83.9	89.4	74.3	84.7
1. 8yrs 3mths	± 4.0	± 4.9	± 3.5	± 9.3	± 7.7
2. 2yrs 8mths					
<b>South Australia</b>	86.6	85.5	87.8	72.7	n.a.
1. 8yrs 6mths	± 2.8	± 3.2	± 2.4	± 5.5	
2. 3yrs 3mths					
<b>Western Australia</b>	88.8	86.8	90.8	60.5	86.4
1. 8yrs 2mths	± 2.1	± 2.5	± 1.8	± 5.0	± 2.4
2. 2yrs 7mths					
<b>Tasmania</b>	88.9	86.0	91.9	80.9	74.1
1. 9yrs 0mths	± 2.5	± 3.1	± 2.2	± 5.4	± 11.1
2. 3yrs 7mths					
<b>Northern Territory</b>	77.8	75.9	79.7	41.3	27.1
1. 8yrs 8mths	± 2.3	± 3.1	± 2.7	± 4.1	± 4.3
2. 3yrs 3mths					
<b>Australian Capital Territory</b>	95.3	94.2	96.3	90.5	86.1
1. 8yrs 9mths	± 1.0	± 1.5	± 1.3	± 11.4	± 4.8
2. 3yrs 6mths					
<b>Australia<sup>(f)</sup></b>	89.7	87.9	92.0	73.4	89.3
	± 2.5	± 3.0	± 2.2	± 6.2	± 2.8

n.a. not available

Note: The achievement percentages reported in this table include 95% confidence intervals, for example, 80.0% ± 2.7%.

(a) The typical average age of students at the time of testing, expressed in years and months.

(b) The typical average time students had spent in schooling at the time of testing, expressed in years and months.

(c) The methods used to identify Indigenous students and students with a language background other than English (LBOTE) varied between jurisdictions as outlined in the explanatory notes in Appendix 3.

(d) Data from Queensland are based on a representative sample of approximately 10% of year 3 students from government and non-government schools.

(e) Data from Queensland for the percentage of male, female, Indigenous and LBOTE students do not include students who were formally exempted from the testing.

(f) Student sub-group data for Australia do not include Queensland students who were formally exempted from the testing.

**Table 6.5 Percentage of year 3 students achieving the reading benchmark, by State and Territory, 2000**

State/Territory 1 Average age <sup>(a)</sup> 2 Yrs of schooling <sup>(b)</sup>	Percentage of students achieving the benchmark	Percentage of male students achieving the benchmark	Percentage of female students achieving the benchmark	Percentage of Indigenous <sup>(c)</sup> students achieving the benchmark	Percentage of LBOTE <sup>(c)</sup> students achieving the benchmark
<b>New South Wales</b>	93.1	91.5	94.8	83.1	92.8
1. 8yrs 9mths	± 1.9	± 2.3	± 1.5	± 4.9	± 2.1
2. 3yrs 7mths					
<b>Victoria</b>	93.0	91.1	95.1	78.4	90.9
1. 8yrs 11mths	± 1.9	± 2.3	± 1.5	± 6.1	± 2.5
2. 3yrs 7mths					
<b>Queensland<sup>(d)</sup></b>	92.6	90.8	94.4	81.0	92.2
1. 8yrs 4mths	± 3.5	± 4.4	± 3.2	± 10.1	± 6.0
2. 2yrs 8mths					
<b>South Australia</b>	86.8	84.4	89.3	59.2	82.4
1. 8yrs 6mths	± 2.6	± 3.0	± 1.7	± 4.2	± 3.1
2. 3yrs 3mths					
<b>Western Australia</b>	95.8	95.2	96.5	86.6	95.1
1. 8yrs 2mths	± 1.1	± 1.3	± 0.9	± 3.3	± 1.3
2. 2yrs 7mths					
<b>Tasmania</b>	91.2	88.7	93.6	82.5	89.8
1. 9yrs 1mth	± 2.3	± 2.9	± 2.0	± 5.5	± 5.1
2. 3yrs 8mths					
<b>Northern Territory</b>	65.3	62.2	68.6	25.6	39.7
1. 8yrs 8mths	± 3.2	± 3.8	± 3.7	± 4.0	± 3.9
2. 3yrs 3mths					
<b>Australian Capital Territory</b>	95.1	94.0	96.2	87.5	82.5
1. 8yrs 8mths	± 1.2	± 2.0	± 1.5	± 9.6	± 10.6
2. 3yrs 6mths					
<b>Australia</b>	92.5	90.9	94.3	76.9	90.8
	± 2.2	± 2.7	± 1.8	± 6.5	± 2.6

Note: The achievement percentages reported in this table include 95% confidence intervals, for example, 80.0% ± 2.7%.

(a) The typical average age of students at the time of testing, expressed in years and months.

(b) The typical average time students had spent in schooling at the time of testing, expressed in years and months.

(c) The methods used to identify Indigenous students and students with a language background other than English (LBOTE) varied between jurisdictions as outlined in the explanatory notes in Appendix 3.

(d) Data from Queensland are based on a representative sample of approximately 10% of students from government and non-government schools.

## Making comparisons

Tables 6.4, 6.5 and 6.6 highlight apparent differences between States and Territories in relation to the proportion of students achieving the benchmark. However caution needs to be applied when considering these differences. While the assessment and equating processes used have ensured the various tests are directly comparable, large differences remain in the characteristics of the population being assessed in each State. For example, while ministers are keen that the monitoring against national benchmarks will soon include all students from both government and non-government schools, not all non-government schools participated in 2000 and this may have contributed to differences between States.

Other relevant issues include major differences between jurisdictions in school starting arrangements that result in variations in the time students would have spent in schooling prior to the testing. As well, there are large differences between States and Territories in relation to a number of factors that are known to influence measured literacy achievement.

For example, it is known that achievement in reading is strongly correlated with the socioeconomic circumstances of students being assessed. As well, students who do not usually speak English, or who have just begun to speak English, would be expected to be at some disadvantage during assessment. Not only are there variations in the proportion of such

students between States and Territories, but there are also variations in the policies regarding inclusion in the testing programs.

Tables 6.7, 6.8 and 6.9, as well as the explanatory notes in Appendix 3, attempt to describe and quantify some of the differences between the States and Territories.

The use of confidence intervals with the benchmark results provides a way of making inferences about the achievement of students that reflects the uncertainty associated with the measurement of student ability. It is anticipated that statistical tests of significance, that further assist readers make comparisons

about students' achievements, will be incorporated into future reports. Until these technical improvements are implemented, readers are urged to be cautious when comparing results.

As shown in Tables 6.5 and 6.6 the majority of students from each of years 3 and 5 achieved the reading benchmark in 2000. As the benchmark represents the minimum level of competence deemed necessary to allow meaningful participation in the school learning program, this result is not surprising. However, it remains of concern that approximately 7 per cent of year 3 students and 13 per cent of year 5 students were unable to achieve the benchmark and their successful progress through schooling is, therefore, seriously compromised.

**Table 6.6 Percentage of year 5 students achieving the reading benchmark, by State and Territory, 2000**

State/Territory 1 Average age <sup>(a)</sup> 2 Yrs of schooling <sup>(b)</sup>	Percentage of students achieving the benchmark	Percentage of male students achieving the benchmark	Percentage of female students achieving the benchmark	Percentage of Indigenous <sup>(c)</sup> students achieving the benchmark	Percentage of LBOTE <sup>(c)</sup> students achieving the benchmark
<b>New South Wales</b>	89.1	87.1	91.2	70.9	86.7
1. 10yrs 9mths	± 1.7	± 1.9	± 1.5	± 3.9	± 2.2
2. 5yrs 7mths					
<b>Victoria</b>	92.1	90.6	93.7	75.1	89.0
1. 10yrs 11mths	± 1.9	± 2.2	± 1.7	± 7.5	± 2.8
2. 5yrs 7mths					
<b>Queensland</b>	78.5	75.1	81.7	54.4	74.4
1. 10yrs 4mths	± 3.6	± 3.9	± 3.5	± 6.1	± 4.9
2. 4yrs 8mths					
<b>South Australia</b>	84.4	82.2	86.7	55.9	81.9
1. 10yrs 6mths	± 1.4	± 1.5	± 1.4	± 3.1	± 1.5
2. 5yrs 3mths					
<b>Western Australia</b>	93.6	92.4	94.9	70.9	89.6
1. 10yrs 2mths	± 1.0	± 1.2	± 0.8	± 3.4	± 1.4
2. 4yrs 7mths					
<b>Tasmania</b>	81.4	78.7	84.3	66.1	78.6
1. 11yrs 0mths	± 2.9	± 3.3	± 2.8	± 7.8	± 9.2
2. 5yrs 8mths					
<b>Northern Territory</b>	71.2	69.3	73.1	34.2	46.0
1. 10yrs 8mths	± 2.8	± 3.4	± 3.3	± 4.1	± 4.1
2. 5yrs 3mths					
<b>Australian Capital Territory</b>	94.0	93.0	98.7	83.7	81.4
1. 10yrs 8mths	± 1.3	± 2.3	± 2.5	± 12.1	± 15.2
2. 5yrs 6mths					
<b>Australia</b>	87.4	85.2	89.6	62.0	84.9
	± 2.1	± 2.3	± 1.9	± 4.8	± 2.6

Note: The achievement percentages reported in this table include 95% confidence intervals, for example, 80.0% ± 2.7%.

(a) The typical average age of students at the time of testing, expressed in years and months.

(b) The typical average time students had spent in schooling at the time of testing, expressed in years and months.

(c) The methods used to identify Indigenous students and students with a language background other than English (LBOTE) varied between jurisdictions as outlined in the explanatory notes in Appendix 3.

**Table 6.7 Years of schooling and level of participation, by State and Territory, 2000**

State or Territory	Average age at time of testing <sup>(a)</sup>		Years at school <sup>(b)</sup>		Percentage of students assessed <sup>(c)</sup>	
	Year 3	Year 5	Year 3	Year 5	Year 3	Year 5
New South Wales	8yrs,9mths	10yrs,9mths	3yrs,7mths	5yrs,7mths	93.2	93.5
Victoria	8yrs,11mths	10yrs,11mths	3yrs,7mths	5yrs,7mths	89.5	89.7
Queensland	8yrs,4mths	10yrs,4mths	2yrs,8mths	4yrs,8mths	8.7 <sup>(d)</sup>	97.1
South Australia	8yrs,6mths	10yrs,6mths	3yrs,3mths	5yrs,3mths	79.2	93.7
Western Australia	8yrs,2mths	10yrs,2mths	2yrs,7mths	4yrs,7mths	89.4	91.2
Tasmania	9yrs,1mth	11yrs,0mths	3yrs,8mths	5yrs,8mths	96.2	96.0
Northern Territory	8yrs,8mths	10yrs,8mths	3yrs,3mths	5yrs,3mths	80.0	85.1
Australian Capital Territory	8yrs,8mths	10yrs,8mths	3yrs,6mths	5yrs,6mths	68.3	67.2

- (a) The typical average age of students at the time of testing, expressed in years and months.
- (b) The typical average time students had spent in schooling at the time of the testing, expressed in years and months.
- (c) The percentage of students from all schools who were assessed includes exempted students but not students absent or withdrawn by parents/ care-givers from the testing and not students attending schools which did not participate in the testing at all. The figure is calculated as a percentage of the total number of full-time government and non-government students based on data from the *National Schools Statistics Collection*.
- (d) Queensland assessed a representative sample of students at the year 3 level – if population testing had been undertaken it is estimated 95% of the year 3 students would have been assessed.

**Table 6.8 Participation by school sector, 2000**

State or Territory	Percentage of assessed government school students <sup>(a)</sup>		Percentage of assessed non-government school students <sup>(b)</sup>		Proportion of assessed students (per cent)			
	Year 3	Year 5	Year 3	Year 5	Government school students <sup>(c)</sup>		Non-government school students <sup>(d)</sup>	
	Year 3	Year 5	Year 3	Year 5	Year 3	Year 5	Year 3	Year 5
New South Wales	94.4	94.8	90.1	90.4	73.9	72.6	26.1	27.4
Victoria	88.4	88.5	92.4	92.6	70.2	69.2	29.8	30.8
Queensland	8.7 <sup>(e)</sup>	97.0	8.7 <sup>(e)</sup>	97.3	76.6	75.7	23.4	24.3
South Australia	94.1	93.8	39.7	93.4	86.3	73.0	13.7	27.0
Western Australia	89.0	91.1	90.7	91.7	75.4	74.7	24.6	25.3
Tasmania	96.3	96.3	95.8	95.0	78.8	76.7	21.2	23.3
Northern Territory	79.4	85.5	82.5	83.5	80.3	79.8	19.7	20.2
Australian Capital Territory	93.2	93.6	17.2	18.3	91.8	90.5	8.2	9.5

- (a) The percentage of assessed students from government schools includes exempted students, but not students absent or withdrawn by parents/ care-givers from the testing and not students attending schools that did not participate in testing at all. The figure is calculated as a percentage of the total number of full-time government students based on data from the *National Schools Statistics Collection*.
- (b) The percentage of assessed students from non-government schools includes exempted students, but not students absent or withdrawn by parents/ care-givers and not students attending schools which did not participate in testing at all. The figure is calculated as a percentage of the total number of full-time non-government students based on data from the *National Schools Statistics Collection*.
- (c) The percentage of assessed government school students compared with all assessed students.
- (d) The percentage of assessed non-government school students compared with all assessed students.
- (e) Queensland assessed a representative sample of students at the year 3 level – if population testing had been undertaken it is estimated that approximately 95% of the year 3 students from both government and non-government schools would have been assessed.

**Table 6.9 Exemptions, absences and participation of equity groups, by State and Territory**

State or Territory	Percentage of students exempted from testing <sup>(a)</sup>		Percentage of students absent or withdrawn <sup>(b)</sup>		Percentage of assessed students			
					Indigenous students <sup>(c)</sup>		LBOTE students <sup>(d)</sup>	
	Year 3	Year 5	Year 3	Year 5	Year 3	Year 5	Year 3	Year 5
New South Wales	1.2	1.1	5.1	4.8	3.7	3.6	23.5	22.6
Victoria	n.a.	n.a.	10.5	10.3	0.7	0.7	13.5	13.4
Queensland	1.3	1.3	3.3	2.4	8.5	5.9	6.7	7.8
South Australia	3.3	2.5	5.4	6.3	3.6	3.0	13.8	15.0
Western Australia	1.1	1.0	8.6	6.8	4.3	5.1	13.5	13.9
Tasmania	1.0	0.6	3.8	4.0	5.5	5.4	2.9	2.8
Northern Territory	3.1	2.2	20.0	14.9	22.1	24.1	26.8	29.5
Australian Capital Territory	3.1	3.3	6.3	5.9	1.9	1.5	6.3	5.4

n.a. not available

(a) The percentage of students who were exempted from the testing program in the relevant State or Territory. Exempted students are reported as not achieving the benchmark. The percentage of exempted students is calculated as a percentage of the total number of full-time government students based on *National Schools Statistics Collection* data, together with the non-government students who participated in the relevant State and Territory testing programs.

(b) The percentage of students who were absent or were withdrawn by parents/care-givers from the testing program in the relevant State or Territory. These students are not included in the benchmark calculations. The percentage of absent/withdrawn students is calculated as a percentage of the total number of full-time government students based on *National Schools Statistics Collection* data, together with non-government students who participated in the relevant State and Territory testing programs.

(c) The percentage of assessed Indigenous students. The percentage of Indigenous students includes exempted students and is calculated as a percentage of the total number of full-time government students based on data from the *National Schools Statistics Collection* and non-government students who participated in the relevant testing programs. The specific ways in which Indigenous student information was collected and/or categorised were characterised by a degree of variation across the jurisdictions.

(d) The percentage of assessed students with a language background other than English (LBOTE). The percentage of LBOTE students includes exempted students and is calculated as a percentage of the total number of full-time government students based on data from the *National Schools Statistics Collection* and non-government students who participated in the relevant State or Territory testing programs. The specific ways in which LBOTE information was collected and/or categorised were characterised by a degree of variation across the jurisdictions.

### Changes over time

The year 2000 is only the second year for which reading benchmark data have been available, so there is insufficient evidence to indicate any clear trend. The overall results are summarised in Table 6.10. We will need to wait until the data for subsequent years are available before being in a position to make judgements about improvements in literacy standards.

### Gender differences

As indicated in Table 6.11, there were no measurable differences between the achievement of year 3 reading benchmarks by boys and girls in both 1999 and 2000. However, there was some evidence of potential differences between the achievement of the year 5 reading benchmarks between boys and girls in both 1999 and 2000.

**Table 6.10 Percentage of students achieving the reading benchmark, Australia, years 3 and 5, 1999, 2000**

Year	Year 3	Year 5
1999	89.7 ± 2.5	85.6 ± 2.0
2000	92.5 ± 2.2	87.4 ± 2.1

**Table 6.11 Percentage of students achieving the reading benchmark, by gender, years 3 and 5, Australia, 1999, 2000**

Cohort	Male students	Female students
Year 3, 1999	87.9 ± 3.0	92.0 ± 2.2
Year 3, 2000	90.9 ± 2.7	94.3 ± 1.8
Year 5, 1999	83.4 ± 2.3	88.4 ± 1.8
Year 5, 2000	85.2 ± 2.3	89.6 ± 1.9



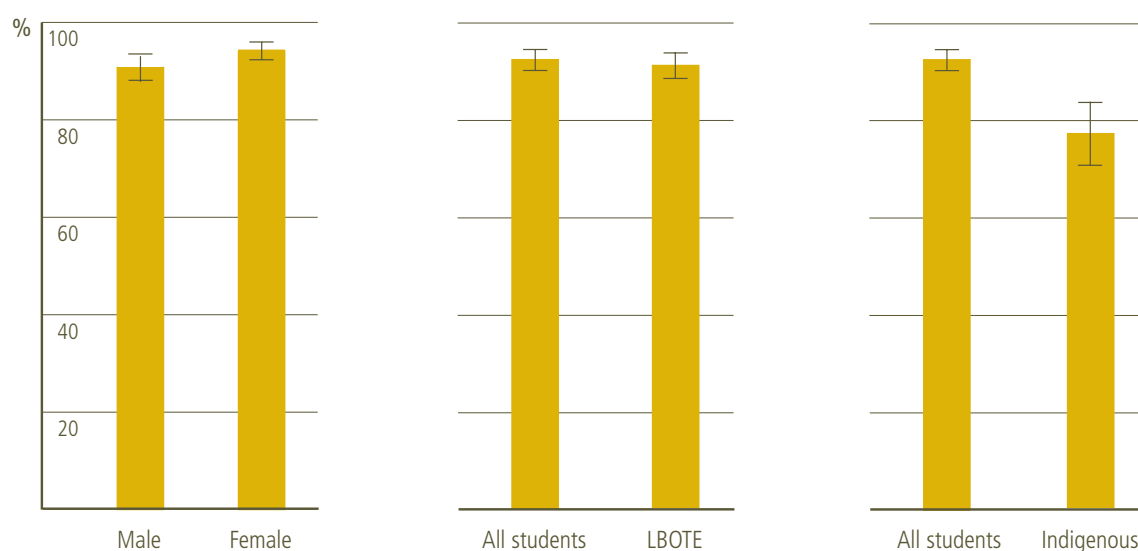
## Indigenous students

The relative performance of Indigenous students is summarised in Table 6.12 and in Figures 6.2 and 6.3 where the gap between the performance of Indigenous students and all students is clearly observable. While there are no substantive changes in relative performance between 1999 and 2000, there is little in these results to indicate improvement for Indigenous students.

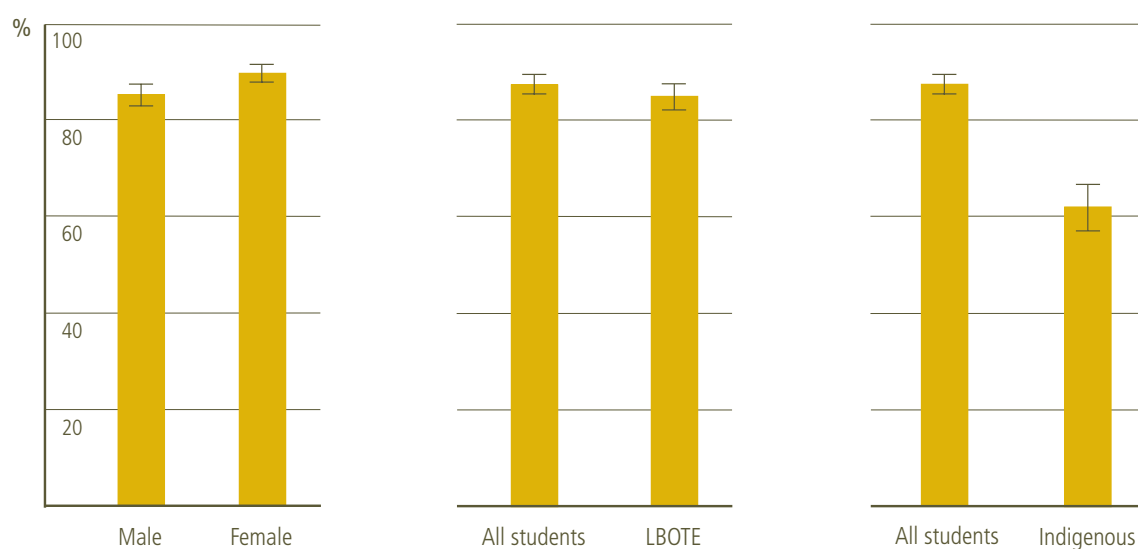
**Table 6.12 Percentage of Indigenous students achieving the reading benchmark, Australia, years 3 and 5, 1999 and 2000**

Cohort	Indigenous students	All students
Year 3, 1999	73.4 ± 6.2	89.7 ± 2.5
Year 3, 2000	76.9 ± 6.5	92.5 ± 2.2
Year 5, 1999	58.7 ± 4.2	85.6 ± 2.0
Year 5, 2000	62.0 ± 4.8	87.4 ± 2.1

**Figure 6.2 Percentage of year 3 students achieving the reading benchmark, by sub-group, Australia, 2000**



**Figure 6.3 Percentage of year 5 students achieving the reading benchmark, by sub-group, Australia, 2000**



# Implementing the National Literacy Plan in States and Territories

The following sections provide information on the progress made in 2000 in implementing the key literacy elements of the National Literacy and Numeracy Plan in each of the States and Territories. An outline of the assistance provided by the Commonwealth is also available. The results of assessments against the benchmarks are also available online. Information on implementation of the numeracy elements of the plan are provided in Chapter 7, 'Numeracy student outcomes'.

## New South Wales

### Policies and programs

New South Wales continued to implement the State Literacy Strategy as part of the State Literacy and Numeracy Plan. The strategy, introduced in 1997, provided a comprehensive and coordinated structure to ensure early identification of students experiencing difficulty in acquiring literacy skills in primary and secondary schools. Learning support teams in schools developed systems for monitoring student achievement in literacy, determining the nature and extent of support to be provided and assessing individual progress over time. Literacy support teams continued to guide school implementation of the State Literacy Strategy.

Each of the 40 districts was supported by a district literacy consultant. These consultants implemented a strategic model by supporting a small number of schools, to ensure that they had an impact on whole-school planning, curriculum and assessment practices and influenced long-term change. They provided training and development in literacy skills and enhanced the knowledge and understandings of teachers from Kindergarten to year 8.

In addition, 25 new linkages consultants provided targeted support for teachers and students in years 5–8. They particularly emphasised addressing the needs of adolescent learners and ensuring continuity of literacy and numeracy learning through whole-school planning and training and development.

Targeted consultancy support was provided in programs to assist schools improve the literacy learning outcomes of

students from socioeconomically disadvantaged communities, Indigenous communities and students requiring English as a Second Language (ESL) assistance. These equity programs operated within the context of the State Literacy and Numeracy Plan. They provided 48 consultants and 60 community officers, who worked with school communities to improve the planning, delivery and outcomes of literacy programs for disadvantaged students. The NSW Disadvantaged Schools Program (DSP), Indigenous programs and the ESL program also provided in-school support through the addition of 280 teachers in schools serving communities of low socioeconomic status and 312 Aboriginal education assistants.

The literacy and the linkages consultants were responsible for training teachers in the year 7 English Language and Literacy Assessment (ELLA) and the primary school Writing Assessment Program (WrAP) criteria marking. Consultants then worked with teachers on curriculum follow-up for individual students and class teaching.

In 2000, Catholic schools in New South Wales maintained an ongoing commitment to quality literacy teaching and learning. Dioceses and congregational schools developed and implemented annual literacy plans that outline strategic approaches to literacy teaching and learning, intervention and professional development. In the archdiocese of Sydney, the plan was augmented by the *Literacy K–6 Position Paper* and the *Secondary Writing Position Paper*, which established goals and expectations.

The Board of Studies began the revitalisation of the curriculum for years 7–10 that had been foreshadowed in the government's 1997 Higher School Certificate (HSC) White Paper, *Securing Their Future*. Guiding principles were established to inform the development of a draft K–10 curriculum framework. Project plans were developed for a revised years 7–10 English syllabus, scheduled for completion in 2002 and implementation in 2003.

Strengthening of literacy in the School Certificate continued in 2000, with the Board of Studies conducting the English literacy test in November for year 10 students. Important changes to the assessment and reporting procedures for the School Certificate provided more detailed and meaningful information on individual achievements. School Certificate documents now use descriptive reporting and provide students with school-based grades in all learning areas as well as their own marks in statewide tests. The new reports give students, parents and

employers more information about what students know and can do, and provide greater detail on specific literacy achievement.

Year 11 students in 2000 were the first students to undertake the new HSC. A new suite of English courses caters for the full range of student ability and ensures that students are challenged to perform at their highest level. The courses include Preliminary and HSC courses in Standard English, Advanced English, ESL for students from a non-English-speaking background, and the Preliminary course Fundamentals of English for students who require extra assistance with literacy skills. One-unit extension courses (one for Preliminary and two for HSC) have also been developed for students seeking further challenge. This increases the number of units of English students may include in their HSC programs.

The Board of Studies also developed a suite of eight Stage 6 Life Skills courses for students with special education needs. These courses, implemented for year 11 students in 2000, include provision of English Life Skills to students who may previously have been excluded from studying HSC English.

## Assessment and reporting

The Basic Skills Test (BST) in years 3 and 5 and ELLA in year 7 continued to provide external indicators of achievement in aspects of literacy. In 2000, the WrAP for years 3 and 5 was available to schools on a voluntary basis. In 2001 this program will be mandatory for all government schools.

Significant changes were introduced in assessment and reporting for the new HSC. Norm-referenced reporting, used for the last time in the 2000 HSC, is being replaced with standards-referenced reporting, which will allow for clear comparisons over time between different cohorts of students. Marks will be given, but there will be an emphasis on descriptive reporting, in terms of what students know and can do. Where there are differentiated courses with common content, such as Standard and Advanced English, results will be reported on a common scale. School-based assessment practices are being redesigned to enable the full range of outcomes in the new syllabuses to be assessed appropriately.

The years 3 and 5 BST in literacy and the year 7 ELLA were administered in systemic Catholic schools in the dioceses of Armidale, Bathurst, Broken Bay, Lismore, Maitland–Newcastle, Parramatta, Sydney, Wagga Wagga, Wilcannia–Forbes and

Wollongong. The WrAP was administered to years 3 and 5 students in sample schools in those dioceses.

In the archdiocese of Canberra and Goulburn, all years 3 and 5 students were assessed for literacy achievement against the national literacy benchmarks via an assessment framework or process developed in the archdiocese. This assessment procedure (used from 1998 to 2000) was based on moderated teacher judgement of student work samples. The procedure was not included in the national benchmark equating process during 1999–2000. Based on the requirements of new Commonwealth education legislation, a standardised ‘equatable’ test measure will be used to assess and report years 3 and 5 (whole cohorts) literacy achievement against the agreed national benchmark in 2001.

During 2000, the independent sector demonstrated movement towards full cohort reporting for years 3 and 5 in schools receiving funding under the Commonwealth’s Literacy and Numeracy Programme. All schools receiving funding under this program were advised of the conditions of funding. Schools were given a choice between the available tests which would meet the criteria; that is the tests were nationally comparable. Some schools chose to participate in the New South Wales Department of Education and Training’s BST, while others participated in the Cost Effective Instrument developed by ACER. The latter test has been renamed LANNA (Literacy and Numeracy National Assessment). As can be gleaned from the initial ACER test nomenclature, the costs of accessing nationally comparable literacy and numeracy tests continued to be a barrier for full cohort participation.

For 2000, nationally comparable literacy and numeracy benchmark data were available for a significant proportion of independent schools in New South Wales, although some independent special schools indicated that the available testing options did not adequately represent what their students know and can do. In response to the administrative guidelines for the Commonwealth’s Literacy and Numeracy Programme for Schools, full cohort data will be available for years 3 and 5 from 2001.

Although many independent schools have a history of participation in the New South Wales Department of Education and Training’s year 7 assessments through ELLA and the recently introduced Secondary Numeracy Assessment Program (SNAP), full cohort data will not be available for 2000. Independent

schools will move towards full cohort literacy and numeracy assessments for year 7 in response to the 2001 Commonwealth funding criteria and the availability of choice in assessment instruments.

## Intervention

The Department of Education and Training assessed students experiencing difficulty in acquiring literacy skills for inclusion in the Reading Recovery Program or the Support Teacher Learning Difficulties Program. In 2000, approximately 8,000 students in 802 schools accessed the Reading Recovery Program. Early Literacy Initiative (ELI) programs operated in 433 primary schools in lower socioeconomic areas with a focus on supporting growth in teacher skills in literacy teaching in classrooms. Additionally, the Log on to Literacy Program targets teachers in rural and remote areas of NSW and allows them to use the Internet to improve their literacy teaching techniques.

A range of electronic and print-based support materials was made available to schools to ensure that teachers are able to intervene and teach explicitly to assist students to achieve the stage/appropriate learning outcomes. Support materials, titled *Linking Basic Skills Test to the Curriculum in Years 3 and 5; Follow Up to BST in Year 3 and Year 5; Literacy 2000* (linking ELLA to year 7 subjects) and *Follow Up to ELLA* were developed. *Evaluating Software and Internet Sites* provided reviews of software and Internet sites in all key learning areas (KLAs) to assist teachers working with students who need additional support in literacy.

Analysis of district-wide testing data by district superintendents and district literacy teams provided guidance in targeting consultancy support to schools. District literacy consultants, as literacy leaders in the district teams, were responsible for providing training and development and support for local schools. This support included guiding schools to reflect on their practices to better meet the needs of all students.

The Board of Studies developed resources to improve outcomes for Indigenous students. *How We Learn What We Need to Know* was developed for years K–6 and an Indigenous literacy research project, Aboriginal Learners and English, was conducted for years 7–10.

In all Catholic schools, year 2000 diocesan and school literacy plans outlined strategies to ensure early identification of primary and secondary students experiencing difficulties in acquiring

literacy skills. Common intervention strategies across the dioceses included:

- early intervention programs, for example Reading Recovery, First Steps, Starting with Assessment (K–3), School-wide Early Literacy and Language (K–3), Literacy Initiatives for Teachers (years 7–8), Secondary Literacy Initiatives Program (year 7)
- specialist ESL teacher allocations
- specialist bilingual support
- provision of specialist ESL New Arrivals teachers
- provision of school-based Literacy Focus teachers
- support by literacy advisers in analysing external test data and developing appropriate teaching and learning strategies
- provision of specialist Aboriginal Education Assistants and Learning Support Assistants
- development of Individual Education Plans for students with disabilities
- regular assessment of students' literacy achievements in all learning areas.

As independent schools are autonomous in nature, they selected interventions that were considered to be most appropriate for their school. Interventions included school-developed projects and the use of commercial materials such as Macquarie University Special Education Centre's programs; First Steps; Ants in the Apple; Spalding; Teaching Handwriting, Reading and Spelling Skills; and Reading Recovery. In addition, many schools participated in cross-sector activities associated with the National Literacy and Numeracy Plan.

## Professional development

In government schools, the training of district literacy consultants focused on:

- understanding of a social view of language
- implementing *Focus on Literacy: Writing*, the department's writing policy
- understanding outcome statements
- developing consistency in teachers' judgements about students' achievements of syllabus outcomes.

Twenty-five new linkages consultants were appointed in October 2000 to serve the 40 school districts. They supported schools and teachers in the middle years of schooling, with particular emphasis on literacy and numeracy in all subjects in years 5–8. This support included facilitation of collaborative planning between secondary schools and their feeder primary schools to ensure students' continuity of learning from Stage 3 to Stage 4. A particular emphasis of the linkages program was the entitlement of all students to teaching appropriate to their stage of schooling.

The training and development needs of teachers and parents in NSW DSP schools was addressed within 477 school communities. The focus of this program was on improving the literacy and numeracy outcomes of students from low socioeconomic status communities. Mutual support and review opportunities were provided for networks of schools.

Professional development for teachers and districts was provided through a range of strategies. Some of these strategies included general training and development opportunities for teachers, as well as for communities of schools, individual school staff meetings and in-class support.

Materials and training were developed to support the implementation of the *Follow Up to BST* and *Follow Up to ELLA* packages. The writing component of the BST for years 3 and 5 included intensive training and development for teachers who marked the writing tests as well as the production and distribution of school support materials.

Coordination days during July and August 2000 were provided for 50 targeted country schools and TAFE and district personnel to enable them collaboratively to implement the TAFE-accredited peer tutor training program. As part of a whole-school plan, trained senior students supported the reading of classroom subject material for students in years 5–8, thereby gaining a TAFE qualification.

In the Catholic sector, a major professional development initiative was the training of teachers to mark the writing components of the years 3, 5 and 7 literacy tests. Statewide workshops were conducted for principals, assistant principals and teachers on the interpretation and analysis of BST, WrAP and ELLA data.

All diocesan offices supported implementation of the Starting with Assessment (K–3) materials. Significant support was also provided for implementation of the *Literacy Initiatives for*

*Teachers in Catholic Schools* kit, which focuses on students at risk in years 7 and 8 across all subject areas.

Individual independent schools developed their own professional development programs. This usually involved in-school activities and selected professional development courses. Some sector-wide professional development initiatives in 2000 included Teaching Early Reading More Successfully (TERMS) and Reading Acquisition for Teenage Students (RATS).

At the start of 2000, TERMS was revised to ensure that it was in line with current research and practice. This course continued to be popular with K–2 staff. Some schools assisted all K–6 staff to understand early reading development in order to ensure continuity of support for students experiencing difficulty with reading.

During 2000, a number of secondary schools assisted the Association of Independent Schools (AIS) to develop and refine a Commonwealth-funded project aimed at secondary students who have not as yet developed early decoding skills. This package was published under the acronym RATS. The project's literature review indicated that quality published materials, such as *Follow Up to ELLA*, were available to support secondary students once they had mastered the early reading skills. On this basis, teachers participated in the development and trialing of early reading materials for teenage students and provided feedback. Participants all concurred that the project provided valuable professional development.

## Other contextual information

In line with government policy, schools are encouraged to give greatest emphasis to English and mathematics to assist in the development of basic literacy and numeracy skills in the early years. English must be studied substantially in each of years 7–10, with 400 indicative hours to be completed by the end of year 10. English is the only compulsory subject in years 11 and 12. The pattern of study must include at least two units of a Board of Studies Developed Course in English, which is equivalent to 120 indicative hours per year. Four English courses are offered to cater for the full range of students.

New South Wales Catholic primary schools were encouraged to implement a literacy block (a minimum of one hour per day) that includes explicit teaching of skills through guided reading, daily writing, individualised spelling, development of student portfolios and integration of literacy in other KLAs.



Independent schools followed the curriculum requirements for primary schools and the syllabuses for secondary schools as prescribed by the New South Wales Board of Studies. All such schools considered the syllabus content and outcomes in addition to the indicative hours recommended by the Board.

## Victoria

### Policies and programs

In 2000, the Early Years Literacy Program was implemented in all Victorian government primary schools and was extended to include the Speaking and Listening component for Prep to year 2 and the reading component for years 3 and 4. The Early Years Literacy Program is a research-based comprehensive and strategic approach to improving literacy outcomes for all students in the first five years of schooling. It is based on the premise that, given sufficient time and support, almost all children can achieve literacy success and a whole-school design approach to school improvement is the most effective way to achieve this.

To assist schools in implementing the Early Years Literacy Program, annual funding of \$50 million continued to be provided for early literacy coordination and one-to-one intervention at year 1. Additional support materials for teachers and parents were made available. A video, *Koorie Students in the Early Years*; a web project, Early Years Literacy and Technology Case Study; and publications for parents, *Books for Kids* and *The Step Into Prep*, were also developed. The parent publications were made available in English and in 15 languages other than English.

Fifteen thousand parents and other members of the community attended a Let's Read Expo held during Literacy Week. This was a three-day event planned to promote the importance of literacy to the wider community.

In 2000, initiatives in relation to middle years (years 5–9) literacy were developed from the work undertaken in 1999 by schools, research organisations and the Early and Middle Years of Schooling Branch of the Department of Education, Employment and Training (DEET). Student literacy in years 5–9 continued as a key focus of the Middle Years of Schooling Strategy with three research projects specifically targeting literacy.

The Middle Years Research and Development (MYRAD) project was commissioned by DEET in conjunction with the Centre for Applied Educational Research (CAER) at the University of Melbourne. It involves 62 clusters, each consisting of one secondary school and up to three of their feeder primary schools. Of these clusters, five have a specific literacy focus. Clusters have developed three-year action plans that they commenced implementing at the end of 2000. Schools have set targets for improvement in a number of KLAs, including literacy. During 2001, they will be required to measure their progress against these targets.

The Middle Years Secondary Literacy Research Project evolved from the Successful Interventions Literacy Research Project. The project, conducted by Deakin University, was inter-systemic and involved 12 focus schools. It is expected that this research will identify key factors that foster literacy development in students.

The Literacy Advance Strategy is the Catholic Education Commission of Victoria's (CECV) response to the National Literacy and Numeracy Plan. This strategy was developed as a systematic sector-wide approach to improving literacy teaching and student achievement in Victorian Catholic schools and has been implemented in schools since the commencement of 1998. The strategy requires all primary schools to monitor their literacy provision carefully and submit annual literacy plans that include:

- implementing a literacy program that incorporates the components of effective classroom teaching, early intervention, specialist assistance and home–school links
- assessing all year 1 students at the beginning of Term 1 to identify those students at risk of not progressing
- participating in the national benchmarking assessments (in Victoria the Achievement Improvement Monitor, AIM) at years 3 and 5
- appointing a literacy coordinator
- submitting an annual Literacy Program Accountability Statement.

All Catholic primary schools in the dioceses of Melbourne, Ballarat and Sandhurst nominated a literacy program for implementation that included the components of effective classroom teaching, early intervention, specialist assistance and home–school links. The programs selected were: Victorian Early Years Literacy; First Steps; ESL in the Mainstream; CLaSS; or a school-designed literacy program. In the diocese of Sale all schools implemented the First Steps Program.

In 2000, 207 schools chose to implement the CLaSS strategy, making it the most popular approach, particularly in the archdiocese of Melbourne and the diocese of Ballarat. In Term 4 2000, a further 42 schools participated in the pre-commencement program and will take part in the project in 2001.

Targeted secondary schools are required to:

- appoint a literacy coordinator
- nominate specific professional development that school staff will attend
- provide a detailed literacy plan that includes details of the new school profile, the strategies and procedures the school uses to identify students' literacy needs, strategies used to assess student progress and outcomes.

The Commonwealth-funded Literacy Advance Research Project (LARP) was conducted by ACER for the CECV. The project is evaluating the effectiveness of the various approaches to the enhancement of literacy being implemented by Victorian Catholic primary schools. A comprehensive report of the findings of Phase 1, which focused on the early years of schooling was published in August 2000. Phase 2 of LARP, which began in 2000, extended the study into the middle primary years.

## Assessment and reporting

In Victoria, students in government schools from Prep to year 2 are assessed annually (using Running Records) against benchmark tests at four different levels. Schools enter their own data on a statewide database. The data are analysed centrally and each school receives a report summarising their own data trends in comparison with 'like' schools and the rest of the State. In 2000, data were also analysed in relation to gender and Aboriginal and Torres Strait Islander (ATSI) status.

Students in years 3 and 5 are assessed using the AIM. The AIM has been aligned with other State and Territory assessments and includes items that assess student performance against the national benchmarks. It is linked to the Victorian Curriculum and Standards Framework (CSF), and provides a range of data to schools, teachers and parents. Individual student data are available only to the student, parent and teacher. Whole-cohort and 'like schools' data are made available to schools for improvement purposes.

Teachers also assess students in relation to the strands and levels of the CSF, and provide written reports of student achievement to parents at least twice each year. Aggregated data of student performance at each year level are provided to the school community through school annual reports.

Data on student performance as measured against the CSF II English KLA were collected centrally. Statewide benchmarks were formulated from the data and schools were encouraged to compare their own data with these. They were then encouraged to plan appropriate professional development and/or resource allocation as part of a school improvement strategy.

Significant data have been collected in the MYRAD project, including attitudinal surveys from students, teachers and leaders and the Developmental Assessment Resource for Teachers (DART) Reading screening of year 5 and year 7 students in over 240 schools.

There was a comprehensive program of student assessment in the Catholic sector in Victoria. In 2000, all Catholic primary schools participated in the Victorian AIM tests at year 3 and year 5.

All year 1 students in the archdiocese of Melbourne and the dioceses of Ballarat and Sandhurst were assessed using the battery of observation instruments contained in the Marie Clay Observation Survey of Early Literacy Achievement. While these assessments were a requirement in year 1, the majority of schools also collected these data from their Prep and year 2 students, as they were a mandated component of the CLaSS project.

CAER, at the University of Melbourne, was commissioned by the CECV to analyse the data collected from the assessments. A CAER report, providing an analysis of the school's test data, along with Reading Recovery Text Level data, was sent to each school that submitted assessment information. In 2000, software was developed that would enable the electronic recording and transfer of the assessment information.

Catholic secondary schools are cooperating in the development of the Victorian AIM assessments at year 7 level. In 2000, Victorian Catholic secondary schools employed a range of assessment tools to ascertain student entry achievement and monitor student progress. The tools included, among others, DART, Reading and Writing Scales, Testing of Reading Comprehension (TORCH), CSF levels, student portfolios and First Steps developmental continua.

More than half of the independent schools that participated in the Survey of Independent Schools used State Literacy Tests in years 3 and 5. Of the schools currently not using these, a quarter said they would consider them for 2001 or 2002.

The majority of schools provided assistance to students needing extra support by:

- arranging additional teachers
- providing access to counselling resources
- allocating extra teaching time outside of mainstream classes
- accessing individual assistance from teacher aides or parents.

Very few schools provided an assessment of their programs. Those that did rated them as effective.

## Intervention

Government primary schools provided additional assistance for students who needed extra support using additional assistance pathways, described in the Early Years Literacy Program. These included the formation of home-school support groups and the development of individual learning improvement plans.

Reading Recovery is the recommended one-to-one intervention program for students in year 1. In 2000, 22.37 per cent of students in their second year of schooling accessed the Reading Recovery Program. There were 1,126 Reading Recovery teachers operating in 1,080 schools and they were supported by 27 Reading Recovery tutors and two Reading Recovery trainers. There were 29 training centres operating across Victoria.

Schools implemented a range of other intervention programs, including Bridging the Gap, Bridges, and Making a Difference.

The Successful Interventions Literacy Research Project, conducted by ACER, was completed. This two-year project involved 44 secondary schools from the government, Catholic and independent school sectors. It identified a number of intervention strategies that schools have found to be successful in improving students' literacy in the middle years.

Five Literacy Focus clusters from the MYRAD project investigated identification strategies for middle years students at risk in literacy. After pre-testing years 5, 6 and 7 students using DART and TORCH, two clusters of schools trialed a computer-based

literacy intervention strategy program, READ 180, from Scholastic Australia.

The Literacy Focus clusters ascertained the Scholastic Reading Inventory (SRI) (Lexile) level for each student in the lowest percentile rankings as a result of the pre-assessments. They then determined the appropriateness of class texts that these students were required to use across their subject areas. In 2001, these clusters will trial intervention strategies to assist the at-risk students.

For Catholic primary schools, Reading Recovery (82 per cent of schools) was the preferred intervention strategy, being a required component of the CLaSS strategy and Victorian Early Years Literacy Program. In addition, schools developed individual learning plans for those students identified as requiring additional assistance, and supported them with specialist Catholic education staff, such as speech pathologists, psychologists, special education advisers and visiting teachers for the visual, hearing and physically impaired.

## Professional development

A comprehensive, multilayered training strategy supported the implementation of the Early Years Literacy Program. It involved a network of 180 highly skilled trainers across the State, who provided initial training and ongoing development for school-based Early Years Literacy Coordinators. These coordinators are key people in each school who lead professional learning teams and provide initial and ongoing training for their teams.

In 2000, training in the Speaking and Listening for Years Prep to 2 and the Reading for Years 3–4 components of the Early Years Literacy Program, as well as ongoing training in other aspects of the program, were provided. Project officers based in each of the nine regions coordinated the regional training programs. In 2000, seven initial and four ongoing training programs were provided for 277 and 600 participants respectively.

The Commonwealth-funded Quality Teacher Program identified literacy as an area for further support. Funds became available at the end of 2000 to support the Middle Years Literacy Program. This program includes the development of an extensive training program for school-based Literacy Leaders and Literacy Coordinators, professional development and the publication of support materials.

Central and regional conferences targeting school leadership teams, teachers of students in the early and middle years and Reading Recovery teachers were held to meet the professional development needs of teachers in relation to teaching and learning theory and practice.

Literacy Advance professional development provided specific system-wide support to the Catholic schools and teachers implementing Literacy Advance, such as:

- training for year 1 teachers in literacy assessment
- training in CLaSS
- training in the Victorian Early Years Literacy Program
- Reading Recovery Teacher Development Course
- Reading Recovery Continuing Contact
- First Steps Professional Development
- ESL in the Mainstream Course.

CLaSS, conducted in partnership with the University of Melbourne, was the major early years literacy initiative of the CECV.

In 2000, 11 Catholic Education Office (CEO) staff (eight from Melbourne, two from Ballarat and one from Sandhurst) received training as CLaSS facilitators and supported school implementation. In addition, the University of Melbourne trained a staff member as a CLaSS trainer. Two hundred and seven schools (39 schools in intake 1, 86 schools in intake 2, 82 schools in intake 3) participated in this project.

The professional development provided was multilevel and included the training of CLaSS facilitators, principals, school-based CLaSS coordinators and teachers. The training was conducted both by individual schools (professional learning teams) and off-site. A Principals Program, a CLaSS Facilitators Program and a CLaSS Teachers Program were conducted off-site.

## Other contextual information

In general, there is no specific time allocation for each KLA within the Victorian education system. However, all schools implement a daily, uninterrupted, two-hour literacy block from Prep to year 2. Schools are also encouraged to extend implementation of the two-hour literacy block to years 3 and 4.

Schools are required to develop three-year School Early Literacy Plans describing the implementation of all aspects of the Early Years Literacy Program within their school and community. The plans must include their commitment to the essential elements of the program:

- release from classroom duties of an Early Years Literacy Coordinator to ensure that the program is fully implemented
- establishment of school-based targets for reading and a commitment to reporting against the statewide minimum standards for reading in Prep and year 1
- a structured classroom program in reading, writing, speaking and listening within a daily two-hour literacy block
- development of individual case management for students requiring additional assistance and access to one-to-one intervention, such as Reading Recovery, at year 1
- development of home-school partnerships through the implementation of a strategic parent participation plan reflecting the needs of the school community
- ongoing professional development for teachers through a multilayered training system that promotes professional learning teams.

As part of the Literacy Advance Research Project, a good deal of contextual data relevant to literacy in Victorian Catholic primary schools was collected in 2000.

The data shows:

- Most schools aimed to provide a daily two-hour literacy block for their students in the early years.
- The literacy program was held in the morning by more than four-fifths of classes and interruptions to that time were kept to a minimum.
- In 2000, the vast majority of schools provided time release for their Literacy Coordinator of greater than 0.2 Full-Time Equivalent (FTE) (typically between 0.4 and 0.6).
- All provided one or more programs for students with special needs in literacy at the year 1 level and 91 per cent provided programs for their year 3 students.
- 82 per cent of schools provided Reading Recovery at year 1 level.

- Almost all (97 per cent) schools reported that parents were involved in their literacy program.
- More than four-fifths (83 per cent) of year 1 teachers and 69 per cent of year 3 teachers in 2000 reported that they had undertaken some professional development in the area of literacy since 1998.

## Queensland

### Policies and programs

A literacy review was undertaken during the period February–June 2000. *Literate Futures: Report of the Literacy Review in Queensland State Schools* identified four priority action areas: student diversity, whole-school planning and community partnerships, the teaching of reading and future literacies.

In September 2000, Education Queensland commenced implementation of some of the recommendations from the review based on the priority action areas.

The Which Boys? Which Girls? – Literacy and Disadvantage Project seeks to improve the literacy outcomes of students from educationally disadvantaged backgrounds by acknowledging, valuing and building on students' home and community literacies. The learnings from the project will be shared through an online professional development module that articulates the processes used, reflections and outcomes.

The Literacy and Numeracy Action Research Project continued into its second year. The aim of this project is to improve literacy and numeracy for students whose main language at home is not English and for Aboriginal and Torres Strait Islander students.

Schools continued implementation of the developmental continua with students in years 1–3, as well as validation (year 2 Diagnostic Net), moderation and intervention support. This was accompanied by evaluation and modification of school English and mathematics programs 1–10 through accreditation processes. Many schools were involved in trialing or piloting the Queensland Board of Senior Secondary School Studies (QBSSSS) English Syllabus and English Extension (Literature) Syllabus. Both have a critical literacy focus and there has been significant professional development in support of these.

All dioceses and Catholic schools were involved in the implementation of the sector-wide Literacy and Numeracy Plan

that is being reviewed and updated to include emerging literacies. Implementation in 2000 suggested that greater emphasis be given to the implementation of whole of school intervention (learning support through the issue of guidelines to schools and the submission of school plans for approval).

Most diocesan schools were using the Support a Reader and Support a Mathematics Learner programs and a sample was involved with the implementation of the Year 3 Test, while all schools participated in the Years 5 and 7 Tests.

Other initiatives within the Catholic sector included training a group of facilitators to support middle schooling initiatives throughout Queensland. The emphasis was on literacy and numeracy outcomes, individual junior secondary programs that offer creative strategies for improving literacy outcomes, and the implementation (in one cluster of schools) of the Lindamood Language Program.

### Assessment and reporting

The literacy achievements of students from all sectors was measured through the Year 2 Diagnostic Net, the sample-based Year 3 Test and the Census Years 5 and 7 Tests. The year 2000 was the last year in which sample testing in year 3 was undertaken, as full census testing is to be carried out from 2001. It is expected that all schools in Queensland will continue to participate in this program.

Literacy achievement in secondary schools was measured through English in years 8–12. Years 8, 9 and 10 English results are subject to internal school moderation. Results were determined by teachers using a criteria-based assessment model. Teachers moderate years 11 and 12 English results across schools in accordance with procedures prescribed by the QBSSSS.

Education Queensland is currently implementing Appraisalment, a process that schools use to identify and make provision for the educational needs of students with learning difficulties and learning disabilities. The Appraisalment process operated in schools on a voluntary basis for years 6 and 7 throughout 1999. During the latter part of 2000 the process was extended to include years 1–5. From the beginning of 2002, all primary schools will implement the Appraisalment process for students with learning difficulties and learning disabilities. It is expected that the process will be fully implemented by the end of 2004.

Education Queensland also undertook the ESL Bandscales for Aboriginal and Torres Strait Islander Students Project, which developed monitoring devices for reading and writing development of Indigenous ESL students in years 1–3. The Bandscales provide a broad description of ESL learners' progress in English language development.

## Intervention

Implementation of a range of intervention strategies, including the highly successful Support-a-Reader and Support-a-Writer programs, continued to provide additional assistance for young children with literacy difficulties in Queensland schools. In 2000, \$4.2 million in State funding was allocated directly to schools to support students identified as requiring additional support through the Year 2 Diagnostic Net.

The Reading Recovery Program was undertaken in 404 Education Queensland schools in 2000, involving 5,000 students, 575 Reading Recovery teachers, four trainee Reading Recovery tutors and 23 Reading Recovery tutors.

Additional projects were undertaken in 2000 to ensure that the literacy needs of all groups of students were catered for. For example, the Boys, Gender and Schooling Project continued to provide modules to address key issues of boys' education, namely literacy participation, retention and achievement. The aim of this project was to provide professional development and support to school teams in diverse communities in order to facilitate development of effective long-term strategies.

Approximately \$1.1 million in Commonwealth funding was used to support intervention in targeted school communities, primarily in far north-Queensland and the Torres Strait. Funds were used to provide intensive English language tuition to eligible students and each school was responsible for the successful outcomes of each student enrolled in the program.

In 2000, intervention projects in independent schools included: Support-a-Writer; Support-a-Reader; Early Years Literacy; phonics programs; Reading Recovery; and school-based literacy and numeracy programs in the primary school. The major intervention strategy employed in the middle years extending through the junior secondary years was *teachers@work* development materials. Vocational literacy and numeracy courses that included national competencies were delivered at the junior secondary level in two independent Aboriginal and Torres Strait Islander community schools.

Sixty-five independent schools participated in formal literacy audits in 2000 and their intervention programs were firmly based within the context of a whole-school literacy program. The incorporation of levelled readers within school library holdings was encouraged, particularly in Aboriginal and Torres Strait Islander community schools.

## Professional development

State funding was provided to schools to assist with the professional development needs of key teachers (teachers responsible for developing and providing support to students requiring additional assistance in literacy) and teachers new to the year 2 Diagnostic Net process. During National Literacy Week, schoolteachers participated in a number of high-quality moderated learning and development activities at a wide range of regional and metropolitan centres.

Ongoing professional development was provided for 451 existing Reading Recovery teachers and training commenced for an additional 124 Reading Recovery teachers and four Reading Recovery tutors. In addition, the Learning and Development Foundation facilitated a number of vacation schools for teachers and paraprofessionals that focused on literacy improvement.

In December 2000, Learning and Development Centres (Literacy) were established in 20 selected schools or clusters of schools. These will be centres for professional sharing and learning of excellence in literacy teaching and learning to improve student learning outcomes through the establishment and support of networks of schools both locally and online. Their initial foci will be whole-school planning, community partnerships and the teaching of reading.

Extensive professional development in the recently released Education Queensland resource *Why Wait – A Way into Teaching Critical Literacies in the Early Years* was provided to primary schools throughout Queensland. This classroom resource provides teachers with detailed lessons and units organised around the Four Resource Model developed by Professor Allan Luke and Peter Freebody. Units cover a range of texts, including community texts, such as local television advertising and posters, and they deal delicately but powerfully with issues such as gender, ethnicity and family diversity.

An initiative within the Catholic sector was the provision of the diocesan School Leadership In-service Program (SCLIP) accredited by the Australian Catholic University. SCLIP



incorporates keynote presentations on aspects of literacy and numeracy. The Coordinator (Literacy and Numeracy) provided support to schools with literacy and numeracy plans as required and also provided professional development to staff, especially with the early years of schooling.

The Association of Independent Schools of Queensland (AISQ) offered an extensive program of professional development and in-service training to independent schools in 2000. Activities included training in:

- the Early Years Literacy Program
- Fostering English Language in Kimberley Schools (FELIKS) – a code switching program for Indigenous students for whom English is a second language
- ESL in the Mainstream, the National Language and Literacy Institute of Australia (NLLIA) (ESL) Bandscales
- *teachers@work* and the Support-a-Learner series to encourage parents and teacher aides to work with the teacher to provide intervention assistance for young students.

Independent schools also implemented a range of school-based professional development activities to improve the literacy and numeracy outcomes of their students. These included training in the First Steps program. Where practicable, independent schools participated in intersystemic activities and developed local area networks on a cooperative basis.

## Other contextual information

Literacy is taught across all curriculum areas within Education Queensland schools. As such, there is a corresponding weighting of allocated time to literacy components of the curriculum. The amount of time allocated to literacy is a school decision based on the particular needs of each school. Similarly, there is no mandated curriculum time allocated to literacy education in Queensland independent schools. Increasingly, independent schools are focusing on cross-curricular literacy intervention at the junior secondary level.

## South Australia

### Policies and programs

During 2000, the new curriculum, the South Australian Curriculum Standards and Accountability (SACSA) Framework

was completed. Developed by the Department of Education, Training and Employment (DETE) in conjunction with the Catholic and independent sectors in South Australia, the new curriculum involved thousands of educators in the largest curriculum consultation and trialing undertaken so far in the State. The completed framework describes curriculum key ideas and outcomes upon which all learners, from birth to year 12, can expect their education to be built.

The new curriculum is organised around the eight learning areas and five Essential Learnings: Futures, Identity, Interdependence, Thinking and Communication.

Literacy and numeracy have been made explicit and developmental throughout the new curriculum in all learning areas. The Essential Learning Communication includes literacy and numeracy and recognises that learners' knowledge, skills and dispositions in these areas enable them to make meaning of their world and communicate their understandings to others. Essential Learnings are interwoven through all levels and bands of the framework and are explicit in all learning areas. This cross-curriculum focus will improve literacy and numeracy outcomes for South Australian students.

The Essential Learnings of the new curriculum, along with the learning areas and equity cross-curriculum perspectives, were developed to help achieve continuity of learning and skill development across the birth-to-year-2 Early Years band and beyond.

The Early Years Strategy continued for the fifth year in 2000. One of the key objectives of the strategy is to ensure literacy and numeracy skill development for children under eight years through funded intervention programs and targeted professional development. An evaluation of the Early Years Strategy undertaken in 2000 found that it had had a marked impact on the quality of learning experiences for children in early years settings. The evaluation also found that the quality of monitoring of children's progress had improved and there was greater learning coherence between the home and the education setting.

The Literacy and Numeracy Strategy 2000–2005 outlines South Australia's commitment to improving literacy and numeracy standards in line with the National Literacy and Numeracy Plan for Schools. This strategy draws together and extends a broad range of programs and initiatives in literacy and numeracy

for children, young people and adults. Key elements of the strategy are:

- Working together: Literacy and numeracy are the responsibility of all educators and are developed across the curriculum.
- Using data: All educators collect, analyse and respond to appropriate data. These data are combined with State and national data to set goals for improvement, report on learners' progress and target resources to students and schools in need.
- Intervening for success: Educators support success for all. They adjust teaching and learning practices to provide prompt, effective and timely intervention as needs arise.
- Adapting and changing: Educators recognise that changes in society and technology change literacy and numeracy demands. Teaching and learning practices are informed by the latest research in the areas of literacy and numeracy.

The Literacy and Numeracy Strategy 2000–2005 was launched in November 2000 and will be supported by educator networks and practitioner research projects from 2001.

The year 2000 was the third year of operation of the South Australian Commission for Catholic Schools (SACCS) Literacy Strategy. Key literacy teachers have been appointed in all schools catering for early years and primary years students. They have been important agents of change within schools. New key literacy teachers were inducted and, together with their more experienced colleagues, were supported by literacy consultants. A particular focus was the establishment of collaborative working teams in schools to examine ways of working with students in need of additional support so that there is some coherence and consistency.

Data were collected for literacy achievements for years 7 and 10 Indigenous students in Catholic schools, using the national statements and profiles and reported as a usual procedure within the Commonwealth Programmes for Schools. Research has clearly demonstrated the links between individual, societal and institutional racism and the retention and success of Indigenous students at secondary level. Consequently, a range of professional development programs, with supporting resources, has been provided for senior secondary teachers. The

programs encourage critical analysis of images of Indigenous people in Australian society.

The Indigenous Education Team developed, in collaboration with schools, a sequential R–7 Indigenous studies curriculum that builds on students' knowledge. The curriculum has a focus on supporting class teachers with a strong emphasis on critical literacy.

Most independent schools identified a literacy leader to support the literacy action plan in the school. Schools were also supported to identify an ESL key teacher and an Indigenous focus teacher, and provided with funding to participate in workshops and seminars that focus on second language acquisition issues, cultural awareness and explicit teaching methodologies.

## Assessment and reporting

The BST program, an assessment for all years 3 and 5 students in DETE schools, continued in 2000. The BST program provides assessment and diagnostic information on aspects of literacy and numeracy and helps to identify students needing extra support and assistance. In 1999, a sample of approximately 2,000 students was selected to participate in the years 3 and 5 writing assessment. In 2000, the sample was supplemented when more schools volunteered to participate, increasing total student numbers to around 5,000, or half of the years 3 and 5 cohort.

Achievement against benchmarks is assessed through student performance in the BST program. In 2000, available data were used by the MCEETYA Benchmarking Taskforce to set years 3 and 5 benchmarks in writing and the year 5 benchmark in reading. This will allow DETE to report student achievement against these benchmarks from 2001. Years 3 and 5 spelling benchmarks will be established in 2001 and reported from 2002. Planning commenced in 2000 for a year 7 literacy assessment to be fully implemented in 2001.

During 2000, School Entry Assessment (SEA) training was completed for teachers in all schools with a junior primary enrolment, to be implemented from 2001. SEA is a tool to assess and describe the literacy and numeracy of five-year-old children as they enter school. Under this initiative, assessment and planning data will be gathered about approximately 93 per cent of the total number of children and students enrolled in

DETE-funded schools. A SEA CD-ROM has been developed as a resource to support teachers as they incorporate this process into their practice.

During 2000, the Catholic sector in South Australia continued to work towards full cohort assessment and reporting against the years 3 and 5 literacy and numeracy benchmarks. To this end, a major pilot was conducted with 2,713 year 5 students in the use of the BST and the WrAP. Developed by the New South Wales Department of Education and Training, these tests are also used in government schools in this State. Students involved in the pilot were from 85 Catholic schools. The cohort comprised 32 Indigenous students and 809 students from homes where someone spoke a language other than English. Only eight students were exempted from the test. In 2001, full cohort testing of students in years 3 and 5 will be conducted using the above instruments, as well as a pilot test for year 7.

The literacy skills of Indigenous students were assessed, with their class cohorts, against the English statements and profiles in years 7 and 10. Through the Basic Skills Pilot in year 5, 32 Indigenous students took part. There were no exemptions. Early years assessment was also conducted for children in their fifth term of school.

In a program of early assessment in Catholic schools, comprehensive achievement data were obtained for students in their fifth term of schooling. A total of 2,921 students were tested in all schools with junior primary students. As reported in 1999, the instruments used were the Marie Clay Observation Survey of Early Literacy Achievement and the ESL Speaking Bandscales. The purpose of the assessments was to:

- improve learning outcomes for students
- identify early students who might have been in need of additional assistance
- identify students who could be accelerated
- inform teaching decisions
- inform system professional development offerings.

Averages for individual schools, regions of schools and cohorts were calculated and statistical reports made available to each school. Schools used their raw data to set up intervention plans for students who were in need of additional assistance. A significant trend in the 2000 data was that those schools with

an ESL teacher returned averages for ESL students that were close to, and sometimes above, the averages for their English-speaking-background classmates.

Work was undertaken during 2000 on the production of an oral language assessment task to accompany the instruments referred to above. The assessment task will be trialed in 2001.

The ESL Program continued to employ the ESL Bandscales as a mechanism for measuring English language proficiency of ESL learners by assigning levels to each student. This information was reported to the system and used as a basis for establishing the level of ESL need in schools and informing funding decisions. At a school level, the information was also used to monitor student achievement, report to parents and help teachers in their programming and planning.

For the first time in Catholic schools, the ESL Bandscale level in Speaking was used. This level provided a clear indication of students' English language proficiency and therefore their needs as ESL learners. As the implementation of early years assessment raised significant awareness of the needs of ESL learners, workshops on early years assessment and ESL students were conducted.

In the independent sector in 2000, action was taken to move towards assessment and reporting against the years 3 and 5 benchmarks. Ninety-four per cent of independent schools in South Australia participated in the literacy and numeracy benchmark assessment process for years 3 and 5. Five schools were exempted on the grounds of their publicly stated educational philosophy. The assessment tools used by the schools are set out in Table 6.13.

**Table 6.13 Assessment instruments used by schools, years 3 and 5, independent schools, South Australia, 2000**

Assessment tool	Schools	Students
Western Australian Literacy and Numeracy Assessment	71%	1,460 year 3 1,568 year 5
NSW BST and WrAP	18%	361 year 3 366 year 5
ACER CEI	11%	374 year 3 360 year 5

The results of the three assessment processes for reading were collated and reported against the reading benchmarks at years 3 and 5.

During 2001, independent schools will progress towards participating in full-cohort assessment for year 7. This will occur through a limited number of schools piloting year 7 assessment, and setting in place firm arrangements for full participation in 2002. Such arrangements would include the selection of appropriate assessment tools and their incorporation into the collaborative equating process established by MCEETYA.

## Intervention

A commitment to improve student learning outcomes in literacy was reflected in two key South Australian documents launched in 2000.

- The *Department of Education, Training and Employment's Strategic Plan, July 2000 – June 2003* identified improved student learning outcomes in literacy as one objective under the strategic direction Raise Standards.
- The *DETE Literacy and Numeracy Strategy 2000–2005* outlines South Australia's commitment to improving literacy and numeracy standards in line with the National Literacy and Numeracy Plan. Key elements of the strategy include the use of a range of data to establish goals for improvement and to identify and implement effective intervention.

Literacy intervention action undertaken in 2000 included the following.

- The target of 100 per cent implementation of School Entry Assessment in DETE schools (with Reception enrolments) was achieved. Staff familiarisation with the process was then managed locally.
- BST results were used as a basis for directing grants to schools for early assistance and intervention for those students in need.
- Specialist advice and early assessment services such as speech pathology were provided.
- The First Start Program established community liaison with Indigenous preschools, resulting in increased referrals from Indigenous families.

- The services of a Reading Recovery tutor were provided to DETE schools in a collaborative venture with Catholic Education SA.
- Vacation literacy programs operated in 20 schools for 505 students with literacy learning difficulties.

The CEO continued to work with the State and independent sectors in the provision of Reading Recovery training courses for teachers. During 2000, forty-five teachers were involved from Catholic schools, from a total of 90 teachers across the sectors. Some 620 students were involved in the program. There continued to be strong support at school and principal level for the Reading Recovery Program. The CEO provided funding for teacher training and release.

Indigenous students considered to be at risk following the early years assessment were able to access the Reading Recovery Program, while other Indigenous students were provided with other one-to-one intervention. Every Indigenous student in years 8–12 was case-managed and visited by the Choices for Indigenous Students (CISS) project officer.

In the independent sector, Reading Recovery was used to provide students with a second chance through intensive one-to-one teaching. Teachers from five schools trained in Reading Recovery in 2000, while 13 schools continued the program with support from the Reading Recovery tutors.

A resource folder was provided to all independent schools. It contained information about approaches for the early identification of students with literacy difficulties, including the Marie Clay Observation Survey of Early Literacy Achievement, as well as case studies from a range of different schools.

Teachers from over 80 per cent of independent schools undertook training in the Early Years Literacy Program, developed by DEET Victoria and incorporating approaches supportive of Reading Recovery. These approaches include:

- literacy in two-hour literacy blocks
- using and analysing running records
- matching children with texts
- guided reading in the classroom.

Schools set targets for achievement, depending on their school context, and work to achieve levels of reading for all students in

the class. Students with difficulties are identified early and intervention programs are developed based on strategic teaching methods and matching students with appropriate texts.

Many independent schools made use of a program based on the Department of Education Employment and Training Victoria program Teaching Readers in Years 3 and 4. The methodology used is supportive of the Early Years Literacy Program and teachers use running records to identify students with literacy difficulties and to develop strategic intervention programs based on the strengths and needs of students. Over one-third of independent schools undertook training in this program in 2000.

By the end of 2000, over 80 per cent of independent schools with primary students had undertaken some training in the program First Steps. In this program, developmental continua are used to monitor students as they progress through the school. The program ensures that approaches used at all year levels are supportive of students' development.

Eight independent schools undertook training in Stepping Out, the program developed for identifying and supporting students in the secondary school. This program provides teachers with strategies for supporting students with literacy difficulties within the context of the classroom. In addition, schools used a range of tests at secondary level to identify students with literacy difficulties. Most schools had a special education centre to support the intervention programs for students with literacy difficulties.

The *Inclusive Teaching Strategies Book* was published by an independent school. It encourages teachers to support students with literacy difficulties within the classroom. Many independent secondary schools used this publication to develop teaching programs to support students with literacy difficulties.

## Professional development

In the government sector in 2000:

- initial work was done on the establishment of an online Literacy and Numeracy Network to coordinate advice, programs and services for parents and teachers to support literacy improvements
- schools and centres developed innovative curriculum models to support Essential Learnings in the SACSA Framework

- the Early Literacy and the ESL Learner professional development course was implemented
- participants in the Early Years Action Research Projects undertook professional development in core learnings to support research in literacy and numeracy
- National Literacy Week seminars and showcases were held around the State and provided professional development for teachers in a wide range of contexts.

Catholic Education South Australia continued its emphasis on providing high-quality literacy professional development for teachers. Courses were conducted at school sites and in regional and central locations, offering a structured, accredited program, with additional accreditation to university courses.

With the introduction of the BST and WrAP, year 5 teachers attended a professional development day to introduce them to the test and to contextualise the test within the broader assessment and reporting framework. In addition, teachers attended a full-day professional development experience focused on the school and parent reports and interpretation of the data.

An alternative model of literacy professional development was introduced through the course Teachers as Researchers: Theory into Practice. This model promotes teacher learning and change by fostering critical reflection, collaboration and effective teaching.

Professional development provided in 2000 to support teachers in independent schools included: First Steps; Teaching Reading 3–5; Reading Recovery; School Entry Assessment in Literacy; ESL in the Mainstream; Indigenous Literacy Links; New Arrival and Bilingual program support; and ESL Identification and Assessment workshops.

A key factor in the success of the professional development program in independent schools was the Open Classroom Program. This is an innovative program in which exemplary teachers who have participated in one of the professional development programs listed above open their classrooms and invite other teachers to see and hear how they are putting their learning into practice. In 2000, the Open Classroom Program included:

- individual teachers describing classroom practice after school
- groups of teachers describing classroom practice after school

- individual or groups of teachers opening their classrooms during school hours
- whole-school development of describing the school's strategy.

Professional development aimed at middle years teachers in independent schools included:

- Inclusive Teaching, a program developed by the Special Education Advisers that promotes the use of inclusive teaching practices in the classroom
- Stepping Out, a middle school program from the First Steps developers – schools will be invited to train tutors for their schools
- ESL in the Mainstream, which provides professional development to teachers in explicit and inclusive teaching methodology specifically addressing the literacy and language issues of those students for whom English is a second language.

## Other contextual information

The South Australian government has made a commitment to a minimum contact time of 70–90 minutes per day in literacy development with particular emphasis on reading and writing in the first three years of school.

Independent schools made their own decisions about the time for literacy. Schools implementing the Early Years Literacy Program and the Teaching Reading 3–5 Program used regular uninterrupted blocks of 90 minutes to two hours.

## Western Australia

### Policies and programs

During 2000, a draft literacy strategy for government schools was circulated for consultation. It reflects the following principles.

- Literacy is the centrepiece of curriculum improvement. Strong literacy skills help students to achieve learning outcomes across all areas of the curriculum.
- A multilayered approach to improving literacy outcomes is required. A combination of programs and initiatives, tailored to individual needs, will be more effective than a single-element approach.

- Early intervention is best. Teachers in all learning areas and at all levels of schooling need tools to monitor progress closely so that they can provide early intervention when a lack of progress indicates the need for additional support.
- Parents and the wider community have a crucial role to play and require encouragement, support and advice about how they can optimise their contribution.

Implementation of the literacy strategy represents a long-term commitment to dedicate resources and focus efforts across the government school system. A significant element of the literacy strategy is the Literacy Net Program, which specifically addresses the needs of students identified as being at risk in relation to national literacy benchmark standards. Those standards have been incorporated in Literacy Net indicators.

The P–3 phase of the Net helps teachers to monitor progress against indicators that describe critical aspects of reading, writing and oral language development as students progress through levels described in the Education Department's Student Outcome Statements. During 2000, all P–3 teachers could access Net training and professional development, which provided support in the area of intervention planning to address the specific needs of individual students. There was a strong emphasis on the involvement of parents in the intervention process.

A component of the Net targets P–2 Indigenous children in selected schools. Feedback after the first year of operation indicated significant improvements in all areas of literacy. In future, strong links will be established between this component of the Literacy Net and the ESL for Indigenous Language Speaking Students (ESL–ILSS) Program, which uses the ESL Bandscales to monitor literacy progress and performance.

Further trialing and development of the 4–7 phase of the Literacy Net was undertaken during the year. This phase of the Literacy Net was based upon a prominent pedagogical framework for teaching reading, data gathering against literacy indicators, and intervention planning. Teachers reported finding that the 4–7 Net helped with the diagnosis of reading and writing difficulties and the development of intervention plans. Schools involved in the trial process received professional development and support through district-based processes. Preliminary work was undertaken to extend the Net into years 8–10.



The Catholic Education Commission developed a draft literacy strategy for 2001–2006, which was distributed to school-based consultative groups for feedback in preparation for trialing in 2001. The strategy aims to:

- support schools and teachers in providing literacy learning for students across all learning areas and phases of development
- deliver additional support for students experiencing difficulties in literacy learning
- establish a coordinated, whole-school approach that acknowledges and incorporates the various languages and cultures in the school community into the learning and teaching program
- identify the professional development teachers need in order to enhance the understandings and practices they use in developing students' literacy skills.

The strategy represents a long-term, systemic and school commitment to enhancing literacy learning for all students by focusing on the central role of literacy in outcomes-focused learning.

The Association of Independent Schools' literacy plan focused on assisting:

- K–3 students so that every child commencing school would achieve a minimum acceptable literacy standard within four years
- students in the middle years of schooling who had not developed adequate literacy skills and as a result were having difficulty in coping with the school curriculum
- students from language backgrounds other than English to develop English language competence and participation in mainstream education activities
- Indigenous students.

## Assessment and reporting

All government and Catholic schools with years 3 and 5 students participated in the Western Australian Literacy and Numeracy Assessment (WALNA), and although inclusion in numeracy testing remained optional for independent schools, 91 schools took part, compared with 53 in 1999.

## Intervention

Under the Commonwealth Literacy and Numeracy Programme (CLNP), 355 government schools received funds on a sliding scale based on the Ross–Farish H index using 1996 Census data. The CLNP was implemented in schools serving communities with the largest proportion of students at risk in relation to literacy and numeracy outcomes. Schools employed a range of strategies and programs to achieve the program's objectives, including:

- use of the Literacy Net
- determination of students' literacy needs by means of First Steps development continua and appropriate intervention plans
- specialised strategies for ESL and Indigenous students
- whole-class, small-group and individual literacy improvement plans within a whole-school context
- professional development for teachers on ways of improving the transition between primary and secondary schooling.

During 2000, two projects specifically focused on the literacy needs of Indigenous students. The ABC of Two-Way Literacy and Learning Project operated with a train-the-trainer model by which professional development about Aboriginal English was provided to district personnel and, through them, to government schools. Deadly Ways to Learn was an Indigenous Education Strategic Initiatives Program – Strategic Results Project (IESIP–SRP) conducted jointly by the government, Catholic and independent school sectors.

Teachers and Aboriginal and Islander Education Officers (AIEOs) collaborated through a research process that culminated in June 2000 with development of a package of videos and two books offering strategies for implementing two-way bidialectal education.

The target was literacy progress (as measured on ESL Bandscales) by Indigenous students in the project equivalent to that of non-Indigenous ESL students (immigrants who had spent two years in Intensive Language Centres and 12 months in mainstream classes). The rate of improvement in reading over four school terms among Indigenous students in the Deadly Ways to Learn project was 50 per cent better than that of the non-Indigenous ESL students.

Implementation of the 'Do You Hear What I Hear?' package, designed to minimise problems associated with conductive hearing loss associated with otitis media, continued and significant numbers of teachers, particularly those with large numbers of Indigenous students, incorporated the 'breathe, blow, cough' (BBC) strategy, which helps students to clear nasal and ear passages and provides short-term relief from the hearing loss associated with middle-ear infections.

Literacy funding accessed by Catholic schools under Commonwealth Targeted Programs required schools to provide literacy plans addressing the needs of students at educational risk. Key elements of schools' literacy plans were a whole-school approach, identification procedures, monitoring and assessment strategies to determine literacy outcomes and planning for improvement.

Progress maps were trialed in Catholic schools as part of the process of implementing the Curriculum Framework.

In the independent sector, CLNP funds were used to:

- provide school-based funding through a submission process
- employ central consultants and deliver sectoral, cluster and school-based professional development
- mount a targeted action research project to support school-based planning needs and initiatives
- support WALNA testing
- sponsor staff from rural and remote schools to attend conferences
- disseminate information among schools, principals, literacy coordinators and classroom teachers
- establish networks.

## Professional development

Professional development was provided to individual Catholic schools to assist them in preparing and implementing their literacy plans, with follow-up discussions to clarify the meaning of a whole-school approach and to identify outcomes for students at risk. Schools were also supported in ensuring that their programs remained on target and in reporting outcomes.

Other professional development activities within the Catholic sector included train-the-trainer workshops for school leadership teams, followed by networking, assessment and reading process workshops; ESL in the Mainstream; Literacy in the Early Years;

FELIKS; and Making the Jump (focusing on Standard Australian English as a second dialect). As part of the Quality Teachers Program, teachers were trained in the use of the Literacy Net P-3.

Ninety-seven independent schools received professional development and/or consultant support. In addition, the consultants were heavily involved in the promotion of Literacy Week activities and managed cross-sectoral projects. *Talk, Play, Learn*, a pamphlet prepared for Literacy Week 2000, was translated into four community languages and distributed to community organisations and junior primary teachers for parent evenings and information sessions.

A website was developed to provide teachers with a forum for ongoing discussion of literacy issues and a source of best practice.

## Other contextual information

The Education Department operates comprehensive ESL New Arrivals and ESL General Support programs. In 2000, a review of service provisions for ESL New Arrivals was conducted, involving consultation with stakeholders in schools and the wider community. Decisions based on this review will be finalised in 2001. The ESL General Support Program funds the provision of ESL visiting teachers and cell teachers, who provide direct support to mainstream classroom teachers with ESL students. It includes provision of an ESL Resource Centre, ESL in the Mainstream professional development and general advocacy and support for ESL learners and their teachers.

Initiatives of individual independent schools included:

- employing literacy coordinators to work with staff and students
- creating literacy profiles for all junior primary students
- linking benchmark levels to the ESL Bandscales progress map
- training students to act as reading mentors
- introducing Literacy Hour and Dormitory Reading programs
- using information technology
- plotting students' progress K-10 on the same progress map
- using testing more for diagnostic purposes than for the collection of baseline data

- administering standardised tests in whole-school literacy testing programs
- using commercially produced packages such as Reading and Comprehension Enrichment (RACE), Readalong and Book-it to improve reading outcomes
- creating individual education plans for students at risk
- undertaking one-to-one teaching and learning programs
- maintaining first languages as a means of promoting second-language acquisition
- consciously planning for a more inclusive curriculum
- having teachers, not aides, work with small groups of students at risk
- using the Scaffolding Literacy for Indigenous Students methodology.

Significant outcomes in 2000 included:

- more students attaining benchmark standards, particularly in spelling and reading
- students transferring literacy skills gained in one area of the curriculum to others
- students developing responsibility in mentoring positions
- evidence of more reading for enjoyment and the selection of more challenging reading materials
- increased student confidence, self-esteem and concentration, leading to increased participation rates and reduced fear of failure
- greater use of, and confidence in using, research skills
- more understanding of how written texts are constructed
- heightened awareness of appropriateness in language use
- a growing tendency among students to articulate why they use particular strategies to solve problems in the context of literacy.

## Tasmania

### Policies and programs

The Tasmanian government believes that it is vital for the Tasmanian community as a whole that as many children as possible achieve their full potential in the area of literacy. For

this reason, teaching literacy is a high priority in the Tasmanian Department of Education throughout all the years of schooling.

In 2000, a Literacy Plan was developed to ensure that there is continuing improvement in each Tasmanian student's literacy, throughout the period of his or her school education. The development of the plan was underpinned by a thorough understanding of current research in the field, and based on information collected about the literacy outcomes achieved by Tasmanian students in the recent past.

The plan:

- sets out policy directions for literacy
- coordinates and maps literacy projects across the State
- outlines the specific goals and outcomes set by the Department of Education.

It also describes a range of programs, projects, research and pilots related to literacy teaching and learning supported by the Department of Education to ensure that the system operates effectively at a strategic level to achieve agreed goals and outcomes.

A fundamental aim of the plan was to develop and explain an approach for resource allocation, management and teaching based on 'strategic intervention' to meet set outcomes. This approach, which was in response to the accountability requirements by both the Commonwealth and State governments, ensured the resource allocation processes were transparent.

The Tasmanian Literacy Plan has as its purpose the realisation of the agreed national goal that students should have attained the skills of English literacy such that every student should be able to read, write, spell and communicate at an appropriate level. The plan also embodies the sub-goal agreed to by ministers for education, that every child commencing school from 1998 will achieve a minimum acceptable literacy standard within four years.

To move towards the achievement of these national goals, the Tasmanian Literacy Plan set the following targets:

- 90 per cent of all students will achieve appropriate Tasmanian literacy outcomes in Strand 1, Reading Texts; Strand 5, Writing Texts; and Strand 7, Spelling at years 3, 5, 7 and 9

- all school partnership agreements developed between 2000 and 2002 include clear statements about the literacy outcomes that the school is aiming to achieve
- 90 per cent of all year 10 students achieve at least the Tasmanian Secondary Assessment Board (TASSAB) English syllabus EN416B or equivalent
- Indigenous students' performance will equal that of non-Indigenous students by 2004.

In 2000, the Literacy Coordinating Committee continued to assist the Department to establish the framework for literacy projects in the State.

The committee held responsibility for:

- advising on the allocation of available funds
- coordinating literacy initiatives occurring within the department to ensure maximum coherence
- undertaking strategic planning in relation to literacy
- providing a gatekeeper role to ensure consistency of policy
- responding to the requirements of Commonwealth funding initiatives
- monitoring standards and information provided by the Office for Educational Review.

Literacy Project and Research Teams supported the State Literacy Co-ordinating Committee by advising on present and potential programs, research and projects. The teams existed for different purposes and for varying lengths of time. Teams varied as research and projects were initiated and/or drew to a close. Membership of Literacy Project and Research Teams included:

- statewide program representatives (eg from the Flying Start Program and the Program of Additional Structure and Support, PASS)
- the Principal Education Officer of English, and from other learning areas as appropriate
- university member(s) with expertise in literacy
- school-based practitioners as appropriate
- a representative of Support Service Managers.

New to literacy programs in 2000 were the Initiatives Based in Schools (IBIS) Programs. The Literacy Coordinating Committee worked in a formal relationship with schools to undertake

literacy programs, projects and research. There were two forms of IBIS Programs:

- Tenders were called for schools willing to undertake designated research projects and/or programs identified by the Literacy Coordinating Committee. Successful tenderers entered into a formal 'memorandum of understanding' with the Office of Education when accepting a tender.
- Identified schools demonstrating successful literacy projects and programs were approached and offered negotiated support for the documentation and dissemination of successful practice. After negotiations a formal 'memorandum of understanding' was entered into with the Office of Education.

## Assessment and reporting

Data from the regular statewide assessment programs in literacy (years 3, 5 and 7) were used to monitor performance against the Literacy Plan's first two intended outcomes as well as to report against the National Benchmarks in literacy and numeracy. School and State results were linked to performance against the Department's Key Intended Literacy Outcomes (KILOs). 'Like-school' and statewide results were also provided to schools to assist school improvement planning. In addition, the Department of Education monitors school partnership agreements and annual reports to ensure that literacy outcomes at school level are defined, measured and reported. At the secondary level, the Tasmanian Secondary Assessment Board reports annually on the levels of student achievement in year 10 English.

By providing advice about the development of appropriate outputs and recommending methods for their measurement, the department's Office for Educational Review assists the Literacy Coordinating Committee in the monitoring of research projects undertaken by tender.

Schools undertaking projects and/or research under the IBIS Program outlined in the State Literacy Plan entered into a memorandum of understanding with the Office of Education. The memorandum stated agreed outputs from projects and/or research and outlined accountability processes.

Teachers are required to write reports to parents, showing the progress of students towards achieving the KILOs in all groups from Prep to year 8. The Kindergarten Development Check is

mandatory for all Kindergarten students. The check was designed to identify the developmental level of each Kindergarten child, and to assist in the early identification of children requiring specific intervention programs. In 2000, for the first time, there was a further requirement that data from the Kindergarten Development Check be entered onto the Schools Administrative Computing System (SACS), for analysis at both the District and State levels.

Catholic sector schools participated in the monitoring exercise developed in collaboration with the State Department of Education. All students in years 3, 5 and 7 were tested in literacy and numeracy. The data obtained from this exercise were used to report achievement against the benchmarks at years 3 and 5 in 2000. Schools received data for their school and for individual students, which assisted with planning and programming for students at risk.

In the year 2000, the majority of independent schools in Tasmania used ACER's LANNA instrument to enable reporting against national literacy and numeracy benchmarks for years 3, 5 and 7.

## Intervention

### Government sector

During 2000, a large range of interventionist programs were in place in Tasmanian government schools.

The Flying Start Program was developed to support all students in Prep, year 1 and year 2 to achieve appropriate literacy, numeracy and social skills. The program is intended to help early childhood students receive a solid foundation in these areas so that they have a good start to their education. The program delivers an extra allocation of staff to all early childhood classrooms.

The Office for Educational Review is responsible for ongoing systemic monitoring and assessment of students' literacy and numeracy performances in years 3, 5 and 7.

The Aboriginal Literacy Program in Early Childhood was developed to meet goal 2 of the Aboriginal Education Strategic Plan 1997–2000. The purpose of this program was to affirm Indigenous student identity, self-value and capacity to succeed in the school system, supporting students to achieve appropriate literacy outcomes.

The Changing Places Program was developed to meet goal 2 of the Aboriginal Education Strategic Plan 1997–2000. A major purpose of the program was to improve proficiency in literacy and numeracy for Aboriginal and Torres Strait Islander primary students.

A significant allocation of monies for literacy and numeracy programs was delivered directly to schools through the School Resource Package. These resources were allocated according to an agreed formula based on schools' needs indices. The purpose of the program is to support schools to achieve the goals outlined in the Tasmanian Literacy and Numeracy Plan.

The ESL program provided teaching resources for intensive English language programs for eligible newly arrived students. Improved English literacy outcomes are a primary goal of the program.

The PASS Program was developed to foster focused teaching of literacy in Prep, year 1 and year 2. The focus of the program is on basic, foundational literacy skills with particular emphasis on those students who are not achieving the appropriate literacy outcomes. The program was delivered through a school cluster model.

Tasmanian Literacy Outcomes (revised KILOs) were developed to support teachers' use of the Tasmanian Literacy Outcomes for reporting to parents, schools and systems through the development of moderated work samples, indicative of students' achievement at a range of year levels. This included publishing, editing and printing of materials developed through school-based initiatives programs.

The printing, publication and dissemination of the Kindergarten Development Check assisted schools in identifying students to be targeted for early intervention.

The Spalding Support and Training Program provided ongoing support and training of teachers in the Spalding method of literacy teaching. The program involved offering Spalding training modules developed for the Tasmanian context, including formal Spalding 1 training sessions.

Under the Reading Recovery Program, with support from DEET Victoria, 12 teachers were trained in the Reading Recovery method of teaching literacy. The training program supported the PASS Program and was aimed at lifting the literacy performance of those students at risk of not achieving appropriate literacy outcomes.

IBIS Programs comprised seven projects based in schools. The results of the following projects will be published for statewide dissemination:

- work samples for K–6
- intensive literacy support for years 3–6
- tools for assessing literacy from birth to age eight
- links between literacies of different subjects for years 7 and 8
- literacy outcomes and literacy assessment processes for years 7 and 8
- online learning for K–3.

### Catholic sector

In Catholic primary schools, all students were assessed according to the Kindergarten Development Check as developed by the Department of Education and Preparatory students were assessed with Early Years in Education Society (EYES) and Middle Infant Screening Test (MIST) screeners. Intervention occurs through Individual Education Programming for those students at risk of not making adequate progress. The First Steps Program is the preferred literacy resource in Catholic schools. All teachers in schools using this resource plot students' progress on the developmental continua.

### Independent sector

Because it is widely acknowledged that a crucial element of any coordinated approach to improving literacy and numeracy levels is the early identification of students who require additional support, independent schools used a number of recognised screens or tests. Some of these were: Prep Literacy Baseline; Early School Assessment – Literacy and Numeracy (NSW); First Steps Developmental Continua; Screening Entry Assessment (Curriculum Corporation); Early Literacy Concepts; Early Mathematics Concepts (ACER); Neale Reading Analysis; British Spelling Test Series; Waddington Reading and Spelling Tests; and Making Up Lost Time in Literacy (MULTILIT) Word Attack Skills Test. In addition, the TORCH and Primary Achievement Test (PAT) Maths were used widely in primary and secondary schools.

Students identified as requiring intervention were provided with programs specific to their levels of development. Information on

student performance in assessments or screens was collected prior to inclusion in intervention programs and at the end of programs. A number of intervention programs were used to assist students in the development of appropriate literacy and numeracy skills. These included: MULTILIT Reading Tutor Program (modified for grade 1); Violet Brand Spelling; Phonics Alive; Forward Together (home program); THRASS, Spalding; K–3 Mathematics Resource (Macquarie University); the Oracy Program; and the Intensive Reading Program (primary and secondary).

### Professional development

Professional development in government schools was undertaken as part of the intervention projects. Therefore, projects such as PASS and Spalding included a professional development component, particularly for teachers working in years K–3. Much of the professional development program for years 3–8 focused on developing the Tasmanian Literacy Outcomes.

Professional development in Catholic schools in 2000 targeted spelling, writing and reading. Sessions were held at different venues around the State to enable maximum participation. First Steps consultants and tutors visited schools and conducted professional development sessions at individual schools or in network cluster groups in various regions. Nineteen new tutors from Catholic schools were trained to deliver the First Steps Program.

All independent schools were provided with information about the implementation of the 1997 National Literacy and Numeracy Plan. This plan, as well as the Commonwealth's publications *Literacy for All: The Challenge for Australian Schools* and *Numeracy, a Priority for All*, played a pivotal role in professional development in schools and continue to be a key feature in ongoing professional development. In addition, schools were encouraged to use the English and Mathematics statements and profiles to provide frameworks around which to develop their literacy and numeracy curricula.

In literacy, First Steps was the main focus for professional development. First Steps is a framework that monitors and reports on children's literacy development during their primary years of schooling. Professional development is organised in cluster school arrangements. Teachers from schools in receipt of funding are committed to attending.



# Northern Territory

## Policies and programs

During 2000, under the Northern Territory Literacy and Numeracy Plan, there was ongoing collaboration between the Northern Territory Department of Education (NTDE), the Association of Independent Schools of the Northern Territory (AISNT) and the CEO in meeting the challenges of providing high-quality literacy education in an education environment where:

- 52 per cent of schools and nearly 27 per cent of students are located in remote areas with a high proportion of socioeconomic and educational disadvantage
- over one-third of young people between five and 17 years have a language other than English as their first language
- nearly 40 per cent of the total student population is Indigenous and many are ESL learners
- the population, including students and teachers, is highly mobile.

Developments during 2000 were both diverse and encouraging.

A major initiative across the three sectors in 2000 was the first phase of the development of a new Northern Territory Curriculum Framework through an extensive process of authentic consultation in order to meet the needs of the diverse student population. The Framework embeds literacy and ESL in the various learning areas, enabling teachers to draw on a range of approaches such as First Steps, ESL, Two-way and Special Education support strategies to meet the needs of their particular student groups.

Classroom teachers were supported in this by project officers located in education offices in various regional centres. In addition:

- a combined literacy and numeracy program was established as part of the new Curriculum Services Branch structure to provide convergent support for schools and foster the development of literacy support teams
- as part of the National Indigenous English Literacy and Numeracy Strategy (NIELNS), a Tri-sector Plan was developed
- literacy and numeracy skills of students in the first years of schooling continued to be monitored at a school level

- students were assessed against the national benchmarks
- schools and clusters continued to build on their middle years strategies and networks
- senior secondary students participated in the writing-based literacy assessment as part of their assessment program.

## Assessment and reporting

In the Northern Territory (NT), the vehicle for assessment of primary students against the national benchmarks is the Multilevel Assessment Program (MAP). All students in years 3 and 5 in urban schools – and those aged eight and ten in schools in predominantly Indigenous communities – were assessed against the benchmarks for reading. Their performance in reading, writing and spelling was recorded and reported to schools. Some trial tests were also conducted at year 7 level.

Both government and non-government education sectors complete MAP testing in the NT. Sample sizes in the government, Catholic and independent sector are very small compared to other jurisdictions. Disaggregation of data to the sector level is likely to lead to unreliable results due to the very small numbers in the sectors, particularly in the non-government sector.

## Intervention

Intervention programs are instigated at system level and at cluster or school level. Each program is designed to meet the specific needs of students in particular educational environments. In 2000, there was close collaboration between the three sectors in the provision of intervention at all stages of schooling.

Over 100 Northern Territory schools provided intervention for students at risk in the early years, at primary level and, in some instances, secondary level, through First Steps strategies. The development of literacy support teams further fostered the notion that all teachers are teachers of literacy. Intervention programs ranging from in-class support through the provision of part-time instructors to individual or small-group withdrawal were implemented. Some clusters of schools developed middle school strategies to facilitate the primary–secondary interface, while in some secondary schools, alternative timetabling, the establishment of sub-schools and the integration of learning areas were trialed.

The needs of ESL learners were met through such programs as those provided in Intensive Language Units, ESL in the Mainstream, ESL in Anangu Schools and ESL-ILSS, in conjunction with programming resources such as Walking Talking Texts. Further needs-based projects were being commenced as part of the NIELNS. The needs of students with disabilities and specific learning requirements were met through a range of programs, from agencies such as the Territory Health Services, from NTDE Student Services resources, school therapist intervention and support programs, and the Aboriginal Hearing Program.

Other successful approaches in independent schools were THRASS and Scaffolding Literacy, while in Catholic schools the development of whole-school literacy plans, guided reading and specific initiatives to improve outcomes were implemented to address the specific needs of individual students.

## Professional development

The principal area of professional development in the Northern Territory during 2000 related to the development of the NT Curriculum Framework through a process involving environmental audits, consultation and piloting. Active consultation with all schools was central to the process, which therefore had a strong professional development strand, including specific-focus group workshops and sessions.

The following literacy projects of Territory-wide significance also provided professional development to Northern Territory teachers:

- the Developing Literacy Partnerships project, which built on First Steps principles and practices, and focused on whole-school development through Literacy Support Team training
- the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Science Education Travelling Program, which demonstrated how science can be used as a vehicle for enhancing literacy outcomes, as well as improving attendance and student participation
- the Literacy Through Libraries project, which provided professional development to teachers in the use of appropriate library technology to support the development of the English language literacy skills of Indigenous students in remote schools.

- the NT Literacy and Numeracy Support Part 2 project, which included the provision of support for early childhood teachers in the identification of appropriate literacy assessment strategies
- the Middle Years Forum, which focused on literacy and numeracy across the learning areas through bringing together cluster teams of teachers to further encourage primary–secondary interface.

Teachers of Indigenous ESL students were supported in meeting the needs of their students through:

- the provision of school-based professional development by ESL coordinators
- the provision of rigorous and accredited professional development courses and follow-up support in schools under the ESL Teacher Development Program
- the provision of ESL theory and teaching strategies by the ESL in the Mainstream Teacher Development Course and ESL in Anangu Schools Teacher Development Course.

Other literacy professional development was provided through the NT Aboriginal Hearing Program and the Phonological Awareness Teacher Inservice Program. In Catholic schools, the FELIKS Program provided professional development in strategies for teaching standard English to students who have Aboriginal English or Kriol as a first language.

In the three Northern Territory Education sectors, a large number of the school, cluster and regional projects funded under the CLNP provided professional development specifically tailored to meet the needs of the teachers in that school, cluster or region.

## Other contextual information

The recommended time allocations for literacy from the Common Curriculum Statement Transition to year 10 are as follows:

- Transition to year 3: a major focus on language and literacy development activities as an essential element in the teaching and learning program each day
- years 4–7: at least five hours in the planned teaching and learning program each week, distributed so that every day students engage in at least one hour of language and literacy activities

- years 8–10: every term each student's teaching and learning program generally includes access to the study of English, in the region of 400 hours over three years.

While recommended time allocations are identified, student attendance patterns vary considerably from school to school. Poor attendance rates may significantly affect the overall time allocated to literacy in any given year level. The NTDE has nominated school attendance strategies as an area of significant focus. Improved attendance is a strategic goal and is embedded in several programs.

Students in years 11 and 12 meet the requirements of the NT Certificate of Education (NTCE) through following the specified curriculum pattern, which aims to develop literacy through:

- student completion of a two-unit sequence (100–120 hours) of English or ESL at Stage 1
- student completion of a two-unit sequence (100–120 hours) of a language-rich subject at Stage 2
- each Stage 1 extended subject framework and Stage 2 syllabus containing appropriate language objectives
- satisfactory student achievement in the Writing-based Literacy Assessment (WBLA).

## Australian Capital Territory

### Policies and programs

In line with the National Literacy and Numeracy Plan the Australian Capital Territory continues to develop assessments and programs that strengthen student achievement in literacy. The work achieves the goal, 'Improve Literacy and Numeracy', and its associated priorities, stated in the ACT Government Schools Plan 1998–2000. Emphasis has been on targeted teaching practices to achieve specific literacy skills. These practices include the development of productive partnerships with parents and carers to further enhance learning outcomes for their children.

### Assessment and reporting

In 2000, years 3 and 5 students were assessed in Reading, Writing (Language), Writing (Content), Spelling in the context of Writing, Viewing, Listening, and Speaking and given a 20-word spelling test. Year 7 students were assessed in Reading, Writing

(Language), Writing (Content) and Spelling in the context of Writing. In addition, a 20-word spelling test was introduced in year 7 in 2000. Year 9 students were assessed in Reading, Writing (Language) and Writing (Content). The literacy assessment program was developed by ACER.

Assessment materials in literacy and numeracy were thematic, allowing schools to integrate the themes into their normal teaching. In 2000, a new theme, Children's Games, was introduced for year 5.

Two comprehensive reports were issued – individual student reports for parents and individual school reports. Student results were reported against the national profiles and the agreed national benchmarks. School results were reported against the whole ACT cohort results for each strand and year group. Earlier release of results, in October 2000, allowed schools to respond quickly to student needs identified through the assessment. Results of assessment in 2000 indicated the following:

- In year 3, there was an increase in the number of students achieving the national reading benchmark: 94.8 per cent of ACT students in the government school system performed above the benchmark, compared with 89.9 per cent in 1999.
- In year 5, 90.8 per cent of students performed above the reading benchmark in 2000, compared to 90.4 per cent in 1999.
- In 1999 and 2000 and in both years 3 and 5, more female students than male students achieved the reading benchmark.
- One hundred and ninety-two Indigenous students completed the ACT Assessment Program, compared with 178 in 1999. In both years this was less than 2 per cent of the student population for years 3, 5, 7, and 9.
- There was a substantial increase in the number of Indigenous students achieving the reading benchmark. In year 3, 87.7 per cent of Indigenous students were above the benchmark, compared with 67.2 per cent in 1999. In year 5, 80.9 per cent of Indigenous students were above the benchmark, compared with 69.0 per cent in 1999.
- The students who fell below the reading benchmark included those who have been learning English in Australian schools for less than two years and students enrolled in special schools and Learning Support Centres.

In keeping with the National Literacy and Numeracy Plan, progress was made towards the introduction of a literacy and numeracy assessment tool at the start of a student's first year of schooling. In 2000, a screening tool in literacy and numeracy, designed to identify the needs of Kindergarten students, was trialed by most primary schools. The evaluation of the trial showed clearly the advantages of an assessment tool administered in Kindergarten that informed intervention programs for identified students.

At the same time, a small group of eight primary schools and one special school piloted the UK-developed CD-ROM assessment package Performance Indicators in Primary Schools (PIPS) Baseline Assessment. The pilot evaluation found that PIPS provided sufficient statistical information to serve both schools' needs and Commonwealth reporting requirements. PIPS will be trialed in all primary schools in 2001.

During 2000, all students in years 3 and 5 in Catholic schools were assessed for literacy achievement against the national literacy benchmarks via an assessment framework and process developed in the archdiocese. This assessment procedure (used from 1998–2000) was based on moderated teacher judgement of student work samples. The procedure was not included in the national benchmark equating process during 1999–2000.

Based on the requirements of new Commonwealth education legislation, a standardised 'equatable' test measure will be used to assess and report years 3 and 5 (whole cohorts) literacy achievement against the agreed national benchmark in 2001.

All the independent schools sampled in the ACT used, or were in the process of trialing, literacy tests for years 3 and 5. Schools provided parents with their child's results and gave parents the opportunity to discuss the results with the school. Teachers were provided with results relevant to their class. Reporting to the wider community and other schools occurred in one school, which forwarded results to affiliated schools within their umbrella organisation.

## Intervention

Through its Learning Assistance Program, the ACT Department of Education and Community Services supports students K–10 with literacy and numeracy learning difficulties. Data from the ACT Assessment Program and from end-of-year Kindergarten assessments determine the lowest-performing 20 per cent of

students, who are then targeted in this program. Learning Assistance teachers work closely with mainstream classroom teachers in a variety of ways determined by each school's need.

The Learning Assistance Program also includes provision for the Reading Recovery Program, which specifically assists students in their second year of schooling who are seen to be at risk in the area of literacy development. In 2000, additional support was provided to primary schools for the implementation of Reading Recovery programs and the training of five new Reading Recovery teachers. A second Reading Recovery tutor was appointed to support trained Reading Recovery teachers and implementation of the program in schools.

In 2000, 32 teachers implemented Reading Recovery programs in 31 schools (46 per cent of ACT primary schools). The tutor trained a group of five new Reading Recovery teachers. A new Reading Recovery training centre was established at Mawson Primary School. In 2000:

- 232 six-year-old students participated in the program (8 per cent of the total ACT year 1 cohort; 17 per cent of the year 1 cohort in Reading Recovery schools)
- 89 per cent of students receiving a full Reading Recovery Program were successfully discontinued at average class levels of achievement in reading and writing.

The ESL program supported schools and preschools to assist ESL learners. Features of the program include:

- a semester-long early-entry-to-preschool scheme
- the provision of two itinerant ESL preschool teachers
- three primary and one secondary intensive English centres for ESL learners with minimal English
- specialist ESL assistance in all ACT primary and secondary schools.

Initiatives in 2000 included programs in five schools to extend partnerships with the parents or carers of ESL learners and the introduction of the oral language assessment kit *Time for Talk* as a tool for assessing ESL learners' oral language proficiency.

The ESL program funded a team of ESL teachers to provide classroom teachers with inclusive strategies through the Language Through Understanding Across the Curriculum (LUAC) Program. In 2000, three high schools received ongoing support services from the LUAC team. These services included assisting

teachers with planning, resource development and classroom support in implementing new strategies. In addition, three primary schools participated in the LUAC professional development program.

The Schools Equity Fund Program assisted disadvantaged schools in providing intervention programs to benefit students from low socioeconomic backgrounds. In addition to specific literacy (and numeracy) objectives, this program aims to involve parents or carers in the education of their children and to provide relevant educational experiences for students at risk. Programs in primary and high schools included:

- parents as tutors programs
- specialist literacy interventions
- experiential enrichment activities.

Operating in its third year, the Literacy and Numeracy Team continued to coordinate the department's literacy programs and initiatives. Initiatives for 2000 included the introduction of measures to evaluate the effectiveness of the programs and to identify and target students at risk.

During 1999, the Barnardos child welfare agency initiated a home tutoring program supporting links between schools and families in low socioeconomic circumstances with seed funding from DETYA. Following the success of this pilot program, the ACT Department of Education and Community Services Literacy and Numeracy Fund provided further funds for the tutoring program in 2000. Barnardos and the literacy and numeracy team established a network for teachers of students in the Barnardos Tutoring Program. The network meetings provided an opportunity for teachers and volunteer tutors to work together in supporting students at risk who were participating in the program.

A parent program on early literacy and language development was developed in collaboration with the ACT Library Service. This parent program expands on the information contained in the *Never Miss a Chance* video produced in 1999. During 2000, a total of 63 families participated in the Never Miss a Chance parent program.

Literacy interventions in Catholic schools during 2000 included a wide range of activities at classroom, school and system level and in accordance with the archdiocesan Literacy and Numeracy Plan. Major aspects were:

- development of the role of the literacy focus teacher in all schools through a professional development program

- completion of the First Steps tutor training program (to have a trained tutor in all schools)
- participation in National Literacy Week activities (including a cross-sectoral conference)
- distribution of the system publication *Literacy News*, showcasing school-based literacy initiatives, once per term
- in-service training in and implementation of a range of Commonwealth-funded professional development programs, such as:
  - the archdiocesan Secondary Literacy Initiatives Program
  - the New South Wales Catholic Education Commission Literacy In-service for Teachers Program
  - the New South Wales cross-sectoral project materials *Starting with Assessment*.
- a focus on the literacy needs of students with disabilities through the annual Individual Education Plan process.

All independent schools provided support to students with special needs in literacy, including those with high-level skills needing extension. Strategies included the use of standardised testing, the employment of a special needs teacher and, in one case, the reduction of class sizes. Some testing took place prior to enrolment but it was clear that early intervention was regarded as important to these schools.

Schools used their special needs staff in different ways, including withdrawal of students for a number of sessions weekly, either in groups or individually. The number of withdrawal sessions varied according to student needs. Generally, the schools were confident that the measures they had in place were effective in meeting student needs.

## Professional development

A number of successful professional development programs for teachers operated in government schools during 2000.

The Early Literacy Officer Program brought together the early years teachers (K–2/3) in a school as a 'professional learning team'. The goal was to improve literacy learning outcomes for the range of students in their classes. Guided by an Early Literacy Officer, teachers shared, examined, challenged and developed their literacy teaching practices in collaborative and mutually supportive ways.

The Early Literacy Officers negotiated with schools an appropriate program of professional development and support for teachers in the early years and worked in the schools for a six-week period. This professional development program identifies and promotes effective school design and classroom practice to enhance literacy and numeracy learning. Three Early Literacy Officers were appointed to work with 16 (23 per cent) primary schools during 2000. These positions were funded from the Learning Assistance budget. Participating schools were selected on the basis of the number of students in need as identified through Kindergarten assessment and information from the Learning Assistance Survey 1999.

The Kindergarten Teachers' Network provided an opportunity for preschool and kindergarten teachers to explore common interests and concerns. A varied program of presentations is selected each year, based on their relevance to both preschool and kindergarten teachers. In 2000, the meetings focused on numeracy, Indigenous education, storytelling and child health and development.

As part of a four-year literacy strategy, Literacy Matters (1997–2000), the ACT funded the final implementation stage of First Steps and trained school-based facilitators in each primary school and additional facilitators from the preschool sector to deliver the Oral Language materials. In 2000, the Oral Language component was delivered by these school-based facilitators to all primary schools and preschools.

In 2000, six teachers were funded from the Learning Assistance Program to complete a one-year Graduate Certificate in Professional Studies (Special Education) at the University of Canberra. The course was specifically designed for teachers in their roles of supporting students at risk in years K–10.

All Learning Assistance Teachers were invited to a three-hour professional development session each term to support them in their roles of working with students at risk. The meetings also facilitated networking between teachers, particularly to support students as they move from the primary to the secondary sectors.

The focus of the final year of the Phonemic Awareness Project in 2000 was to set up structures to enable continuation of the professional development program, in particular using the video and a range of presenters and formats, from 2001.

Using monies generated by the ACT Literacy and Numeracy Fund, a pilot research project was initiated in 1998 to focus on

disjunctions between school and home literacy practices in the middle years of schooling. In 2000, a series of workshops was developed and trialed and the *Strengthening Partnerships Kit* finalised and distributed to all primary and high schools. A train-the-trainer model was developed and workshops conducted in three areas:

- home–school communication
- homework
- integrating home–school literacy and numeracy practices.

In 2000, nine primary schools and three high schools with exemplary literacy and numeracy programs were identified and funded to provide in-service opportunities for teachers from other schools. Over 230 teachers have undertaken professional development offered in programs targeting students at risk as well as mainstream students in primary and high schools.

The Integrating System and Classroom-Based Assessment Project began in 2000 with two primary schools. It focused on building teacher confidence in analysing the ACT Assessment Program data and using them to support whole-school and classroom assessment practices. Through the establishment of a professional learning community and developing whole-school approaches using the First Steps materials, effective classroom practice for enhancing literacy learning is being identified.

Through regular network meetings, approximately 60 ESL teachers received professional development four times during 2000 in such ESL and literacy areas as Indigenous English, building partnerships with ESL families and moderating the assessment of ESL proficiency. In addition, the Early Literacy and the ESL Learner professional development package was further modified and offered to specialist and mainstream teachers from preschool to year 6.

At the Schools Equity Fund Program meetings of principals and coordinators, effective intervention programs for at-risk students were shared, as were program evaluation techniques. Professional development in whole-school literacy planning, delivered by Carmel Crevola, and Talk to a Literacy Learner, delivered by Lynne Munsie, were provided to the Schools Equity Fund school communities.

A project was undertaken to identify and link the literacy and numeracy demands of vocational training packages with core secondary curriculum and practice. The project resulted in the development of an online resource that can support teachers in



improving literacy and numeracy outcomes for students with low skill levels in these areas.

## Other contextual information

All primary and high schools developed literacy plans at the beginning of 1999 and primary schools reviewed these in 2000, informed by the results of the ACT Assessment Program. The department's Literacy and Numeracy Team and Assessment and Reporting Section used school plans and analyses to plan specific professional development to support schools in their improvement of student literacy and numeracy outcomes.

## Support from the Commonwealth

### Policies and programs

Literacy and numeracy play a key role in enabling all Australian young people to successfully participate in schooling and further study, training and work. The Commonwealth has worked with States and Territories to establish national standards (benchmarks) and ensure that student performance against these standards is publicly reported.

The Commonwealth makes a significant financial contribution to education authorities to support the work of schools and teachers in improving the literacy and numeracy skills of all young Australians. The 1999–2000 Budget provided an additional \$131 million over four years under the Literacy and Numeracy Programme to assist education authorities to measurably improve the literacy and numeracy outcomes for educationally disadvantaged school students. This included \$47 million to assist middle years students who have not developed appropriate literacy and numeracy skills and who therefore have difficulty coping with the demands of the school curriculum. Indigenous students were also a key focus area of this additional funding.

For 2000, the Commonwealth provided \$217 million under the Literacy and Numeracy Programme.

Guidelines for the Literacy and Numeracy Programme for 2000 included strengthened accountability reporting arrangements whereby all education authorities were required to participate in some form of standardised assessment in 2000 and report nationally comparable achievement data against national literacy and numeracy benchmarks.

## National Literacy Week (NLW)

In 2000, the Commonwealth celebrated the second NLW, in collaboration with State and Territory governments and non-government education authorities. NLW focuses on literacy and numeracy in schools and showcases the significant work school communities are undertaking in this foundation area. In 2000, the Commonwealth provided dedicated funding of \$1 million nationally (matched by the States and Territories), to support NLW activities and a further \$170,000 for cash prizes in the form of 11 major awards valued at \$10,000 each and 60 awards of \$1,000 each. The awards recognise schools that have made significant progress in improving students' literacy and numeracy outcomes from a range of different starting points. A feature of NLW 2000 was the strong support from school and business communities, including commercial sponsors. NLW will be conducted again in 2001 and will be renamed National Literacy and Numeracy Week in recognition of the importance of numeracy as a key foundation skill.

## Clearing House for Children's Literacy Projects

The Commonwealth maintains a Clearing House for Children's Literacy Projects, which provides public access to the products of research funded under the CLNP. The research projects are particularly relevant for teachers in primary and secondary schools, as well as for professional development personnel, policy makers, tertiary students and academics. Information about the projects is available on a cost-recovery basis. Information on research projects stored in the Clearing House is available from <http://www.detya.gov.au/schools/LiteracyNumeracy/index.htm>.

## Research publications

In 2000, the Commonwealth published the following reports as part of key research initiatives to support the National Literacy and Numeracy Plan.

- *Mapping the Territory, Primary Students with Learning Difficulties: Literacy and Numeracy*, released in June 2000, provides a national picture of how students with learning difficulties are supported in their literacy and numeracy learning in regular primary schools. It identifies successful strategies for addressing the literacy and numeracy needs of these students. Information about the report was made available to every school in Australia via a brochure. The

report is also available on the department website at <http://www.detya.gov.au/schools/LiteracyNumeracy/index.htm>.

- Literacy, Numeracy and Students with Disabilities was the report from the Literacy, Numeracy and Students with Disabilities project which investigated the provision of literacy and numeracy to students with disabilities in Australian primary schools. The project studied students enrolled in regular classes or in special classes in regular schools. A brochure documenting some suggestions for practice in schools and classrooms, based on the outcomes of the project, was sent to all Australian schools in 2000. The four-volume report is available at <http://www.detya.gov.au/schools/LiteracyNumeracy/index.htm>
- The report *An evaluation of MULTILIT 'Making Up Lost Time in Literacy'* examines research data gathered on low-progress readers typically from years 2–7, who attended the MULTILIT Programme over the years 1996–98. The project's main aim was to provide an evaluation of the efficacy of the MULTILIT Programme in redressing the literacy difficulties of older low-progress readers. MULTILIT is a systematic, skills-based literacy program for researching and developing more effective ways of teaching older low-progress students experiencing severe difficulties in learning literacy skills. The executive summary of the report

is available at <http://www.detya.gov.au/schools/LiteracyNumeracy/index.htm>.

- The Issues Paper *Assessment and Reporting of Student Achievement for Students with Specific Educational Needs Against Literacy and Numeracy Benchmarks* was prepared by ACER. The report indicates the critical issues for stakeholders in relation to the assessment and reporting of performance outcomes of students with specific educational needs against literacy and numeracy benchmarks. The report provides background material to inform policy decisions and will be useful in informing the collaborative development of approaches for handling assessment and reporting of the performance outcomes of students with specific educational needs against benchmark standards. A summary and the full version of the report are available at <http://www.detya.gov.au/schools/LiteracyNumeracy/index.htm>.
- *Options for Outcomes Based Funding in Relation to the Commonwealth's Literacy and Numeracy Programme*, a report by Professor John Ainley, ACER, provides information on options for the future allocation of Literacy and Numeracy Programme funds on the basis of literacy and numeracy outcomes.

## Chapter 7

# Numeracy student outcomes

## Introduction

In March 1997, all State, Territory and Commonwealth education ministers agreed on the following national goal:

every child leaving primary school should be numerate and be able to read, write and spell at an appropriate level.

To provide focus to this goal, ministers also agreed to a sub-goal that:

every child commencing school from 1998 will achieve a minimum acceptable literacy and numeracy standard within four years.

To help support the achievement of these goals, ministers agreed to the implementation of a National Literacy and Numeracy Plan, the essential features of which are:

- early assessment and intervention for students at risk of not achieving minimum required standards
- development of national benchmarks for each of years 3, 5 and 7
- assessment of student progress against these benchmarks
- national reporting of benchmark data
- professional development for teachers.

Since its formulation, education authorities in all States and Territories, assisted by the Commonwealth, have been engaged in implementing these elements of the National Plan.

## Student achievement against benchmarks

This chapter of the report describes the results of testing conducted during 2000 in which the achievement of students in each of years 3 and 5 was measured against the national benchmarks for numeracy. National benchmarks are also available for numeracy in year 7 and assessment programs for this year group are under development.

## The numeracy benchmarks

The benchmarks that underpin the reporting of student achievement describe nationally agreed minimum acceptable standards for numeracy at particular year levels. That is, they represent the minimum acceptable standard of numeracy without which a student will have difficulty making sufficient progress at school.

The benchmarks have been developed with reference to current levels of achievement as demonstrated in national surveys and State assessment programs. There has been extensive consultation with stakeholders and with experts in the areas of numeracy and educational measurement. As well, the benchmarks have been trialed in classrooms in all States and Territories.

Because the benchmarks represent minimum acceptable standards, education ministers meeting as the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) have determined that the national goal should be that all students will achieve at least the benchmark level of performance. Regular publication of benchmark results will enable them and others to monitor progress towards the attainment of that goal.

The standards described by the benchmarks for years 3, 5 and 7 represent increasingly demanding levels of proficiency against which the progress of students through school can be measured and followed. The benchmarks form three important markers along a continuum of increasing competence. The year 3 benchmark with the least demanding level of numeracy is located in the early part of the achievement continuum, while the years 5 and 7 benchmarks, requiring more demanding understandings and skills, are at progressively higher levels. Students' locations on the achievement continuum can be estimated through the assessment procedures undertaken by the States and Territories.

The following are typical examples of the skills required of students who meet the year 3 benchmark:

- Read and write whole numbers up to 999.
- Demonstrate their knowledge of place value (eg know that 86 can also be written as 8 tens and 6 ones).
- Remember, or work out, basic addition facts to  $10+10$ , the matching subtraction facts (eg  $9 + 4 = 13$ ,  $13 - 9 = 4$ ) and extensions of those facts (eg  $23 - 9 = 14$ ).
- Add and subtract whole numbers to 99, by using mental and written methods or by using a calculator.
- Solve simple problems set in familiar situations (eg work out how many of the 26 children are left in the classroom if 12 go to the library).
- Add up coins (up to \$5.00) and know whether they have enough to buy a particular item.
- Tell the time in hours and minutes on digital clocks and hours and half-hours on analogue clocks.

- Collect and organise information, display it in simple bar graphs or picture graphs, and comment on the information.
- Recognise and name familiar 2D and 3D shapes and objects (ie triangle, square, rectangle, circle, cube and pyramid).
- Use language that shows they understand position and direction when using a simple grid, map or plan (eg *'The tree is between the house and the fence'*).

The following are typical examples of the skills required of students who meet the year 5 benchmark:

- Read, write and use whole numbers up to 9999 and place them in order of size.
- Show understanding of simple fractions (eg work out one-third of the children in the group to form one of three equal teams).
- Show understanding and use decimals in familiar contexts (eg say that an amount of \$3.65 is less than another amount of \$3.70; explain that a 1.25L bottle holds more than a 1L bottle, but less than a 2L bottle).
- Work out the answers to addition and subtraction problems that involve three-digit whole numbers or money, and decide the most appropriate way to do that (ie mentally, by written methods or using a calculator).
- Perform simple multiplications and divisions with whole numbers such as  $34 \times 6$ , and  $36 \div 3$ , by using mental or written methods.
- Make mental and written calculations involving money (eg work out mentally the change from \$10.00 for an item worth \$2.90).
- Interpret measures expressed in decimal form (eg know that a measure of 1.5L is one and a half litres; know that a jump of 2.95m is nearly three metres).
- Tell the time in hours and minutes on analogue and digital clocks.
- Describe and compare 2D and 3D shapes and objects according to their important features (eg say why a shape would be a cone rather than a cylinder).
- Use conventional terms such as angle, face, edge and base to name parts of 2D and 3D shapes.

## The assessment process

All jurisdictions have in place State-based numeracy monitoring programs. These programs are well established, understood

and valued within the State educational communities and all States are keen to retain them. As well, they allow States and Territories to report (both publicly and to parents) on the range of performance demonstrated, including benchmark performance. As a result, ministers agreed that assessment against the national benchmarks should occur using the existing State-based programs.

A nationally agreed procedure was developed to equate State and Territory tests and to ensure that reporting of student achievement data against the numeracy benchmarks was comparable. The expert committee that developed the procedure included several of Australia's leading educational measurement experts.

At each of years 3 and 5, equating the State and Territory tests is a three-stage process involving the construction of a common achievement scale for numeracy, determining the location of the benchmark on the common achievement scale, and calculating equivalent benchmark locations on State and Territory achievement scales.

The common achievement scales are constructed from the results of testing students from a representative sample of schools in each State and Territory using the assessments of other States and Territories.

To establish the location of the benchmark at each year level, expert judges are required to envisage a student who is just able to demonstrate the skills described in the benchmark and to estimate the probability of this minimally competent student succeeding on each test item. The judges used in the benchmarking were from all States and Territories and included a range of numeracy specialists and classroom teachers who were qualified to make decisions about the likelihood of students succeeding on the test items.

In the final phase of equating, an equivalent benchmark location is calculated for each jurisdiction's numeracy test. All three aspects of the process contribute to enhancing the comparability of the separate State tests and to ensuring that any differences in State results are likely to be due to factors other than the tests.

## The results

The data in Tables 7.1 and 7.2 represent students who have achieved the benchmark as a percentage of the students participating in the State and Territory testing. The results reported here are for assessed students. This term has been used for students who sat the test and students who were formally

exempted. Exempted students are reported as below benchmark and thus are included in the benchmark calculation. Students not included in the benchmark calculation are those who were absent or withdrawn by parents/care-givers from the testing and students attending a school not participating in the testing.

## Making comparisons

Tables 7.1 and 7.2 highlight apparent differences between States and Territories in relation to the proportion of students

achieving the benchmark. However, caution needs to be applied when considering these differences. While the assessment and equating processes used have ensured the various tests are directly comparable, large differences remain in the characteristics of the population being assessed in each State. For example, while ministers are keen that the monitoring against national benchmarks will soon include all students from both government and non-government schools, not all non-government schools participated in 2000 and this may have contributed to differences between States.

**Table 7.1 Percentage of year 3 students achieving the numeracy benchmark, by State and Territory, 2000**

State/Territory 1 Average age <sup>(a)</sup> 2 Yrs of schooling <sup>(b)</sup>	Percentage of students achieving the benchmark	Percentage of male students achieving the benchmark	Percentage of female students achieving the benchmark	Percentage of Indigenous <sup>(c)</sup> students achieving the benchmark	Percentage of LBOTE <sup>(c)</sup> students achieving the benchmark
<b>New South Wales</b>	93.2	93.1	93.3	83.4	91.9
1. 8yrs 9mths	± 1.7	± 1.7	± 1.7	± 4.2	± 2.1
2. 3yrs 7mths					
<b>Victoria</b>	96.5	96.7	96.1	89.1	94.9
1. 8yrs 11mths	± 1.3	± 1.3	± 1.5	± 5.7	± 1.7
2. 3yrs 7mths					
<b>Queensland<sup>(d)</sup></b>	91.4	91.5	91.8	71.0	88.0
1. 8yrs 4mths	± 3.2	± 3.6	± 3.4	± 12.4	± 7.4
2. 2yrs 8mths					
<b>South Australia</b>	85.3	84.9	85.8	56.8	80.0
1. 8yrs 6mths	± 2.3	± 2.3	± 2.4	± 5.0	± 3.0
2. 3yrs 3mths					
<b>Western Australia</b>	90.5	90.2	90.8	69.4	88.1
1. 8yrs 2mths	± 2.2	± 2.2	± 2.3	± 5.3	± 2.6
2. 2yrs 7mths					
<b>Tasmania</b>	92.8	92.3	93.2	85.6	85.8
1. 9yrs 1mth	± 1.7	± 2.0	± 1.9	± 4.7	± 5.7
2. 3yrs 8mths					
<b>Northern Territory</b>	81.4	80.6	82.4	48.1	56.8
1. 8yrs 8mths	± 2.0	± 2.5	± 2.6	± 4.5	± 3.9
2. 3yrs 3mths					
<b>Australian Capital Territory</b>	95.7	95.2	96.3	88.1	84.5
1. 8yrs 8mths	± 1.1	± 2.1	± 2.3	± 9.9	± 10.6
2. 3yrs 6mths					
<b>Australia</b>	92.7	92.7	92.8	73.7	90.3
	± 2.0	± 2.1	± 2.1	± 7.1	± 2.7

Note: The achievement percentages reported in this table include 95% confidence intervals, for example, 80.0% ± 2.7%.

(a) The typical average age of students at the time of testing, expressed in years and months.

(b) The typical average time students had spent in schooling at the time of testing, expressed in years and months.

(c) The methods used to identify Indigenous students and students with a language background other than English (LBOTE) varied between jurisdictions as outlined in the explanatory notes in Appendix 3.

(d) Data from Queensland are based on a representative sample of approximately 10% of students from government and non-government schools.

Other relevant issues include major differences between jurisdictions in school starting arrangements that result in variations in the time students would have spent in schooling prior to the testing. As well, there are large differences between States and Territories in relation to a number of factors that are known to influence measured numeracy achievement.

For example, it is known that achievement in numeracy is correlated with the socioeconomic circumstances of students

being assessed. As well, students who do not usually speak English, or who have just begun to speak English, would be expected to be at some disadvantage during assessment. Not only are there variations in the proportion of such students between States and Territories, but there are also variations in the policies regarding inclusion in the testing programs.

Tables 7.3, 7.4 and 7.5, as well as the explanatory notes in Appendix 3, attempt to describe and quantify some of the differences between States and Territories.

**Table 7.2 Percentage of year 5 students achieving the numeracy benchmark, by State and Territory, 2000**

State/Territory 1 Average age <sup>(a)</sup> 2 Yrs of schooling <sup>(b)</sup>	Percentage of students achieving the benchmark	Percentage of male students achieving the benchmark	Percentage of female students achieving the benchmark	Percentage of Indigenous <sup>(c)</sup> students achieving the benchmark	Percentage of LBOTE <sup>(c)</sup> students achieving the benchmark
<b>New South Wales</b>	91.1	90.8	91.5	73.5	89.7
1. 10yrs 9mths	± 1.4	± 1.4	± 1.4	± 3.5	± 1.6
2. 5yrs 7mths					
<b>Victoria</b>	94.3	94.1	94.4	82.2	92.4
1. 10yrs 11mths	± 1.4	± 1.4	± 1.4	± 6.2	± 1.8
2. 5yrs 7mths					
<b>Queensland</b>	86.2	86.0	87.0	58.9	82.1
1. 10yrs 4mths	± 2.2	± 2.4	± 2.4	± 5.2	± 3.5
2. 4yrs 8mths					
<b>South Australia</b>	83.0	83.1	82.7	50.4	80.2
1. 10yrs 6mths	± 2.3	± 2.2	± 2.6	± 4.2	± 2.8
2. 5yrs 3mths					
<b>Western Australia</b>	87.5	87.5	87.5	57.2	82.6
1. 10yrs 2mths	± 2.1	± 1.1	± 2.2	± 4.0	± 2.2
2. 4yrs 7mths					
<b>Tasmania</b>	87.6	87.9	87.2	76.6	84.1
1. 11yrs 0mths	± 1.8	± 2.1	± 2.1	± 6.9	± 7.5
2. 5yrs 8mths					
<b>Northern Territory</b>	74.1	74.5	73.7	37.0	50.4
1. 10yrs 8mths	± 2.5	± 3.0	± 3.4	± 4.2	± 3.9
2. 5yrs 3mths					
<b>Australian Capital Territory</b>	91.3	91.0	91.6	79.5	74.9
1. 10yrs 8mths	± 1.7	± 2.5	± 2.5	± 13.7	± 6.8
2. 5yrs 6mths					
<b>Australia</b>	89.6	89.4	89.8	62.8	87.1
	± 1.7	± 1.7	± 1.8	± 4.5	± 2.1

Note: The achievement percentages reported in this table include 95% confidence intervals, for example, 80.0% ± 2.7%.

(a) The typical average age of students at the time of testing, expressed in years and months.

(b) The typical average time students had spent in schooling at the time of testing, expressed in years and months.

(c) The methods used to identify Indigenous students and students with a language background other than English (LBOTE) varied between jurisdictions as outlined in the explanatory notes in Appendix 3.



**Table 7.3 Years of schooling and level of participation, by State and Territory, 2000**

State or Territory	Average age at time of testing <sup>(a)</sup>		Years at school <sup>(b)</sup>		Percentage of students assessed <sup>(c)</sup>	
	Year 3	Year 5	Year 3	Year 5	Year 3	Year 5
New South Wales	8yrs,9mths	10yrs,9mths	3yrs,7mths	5yrs,7mths	93.3	93.5
Victoria	8yrs,11mths	10yrs,11mths	3yrs,7mths	5yrs,7mths	89.7	89.7
Queensland	8yrs,4mths	10yrs,4mths	2yrs,8mths	4yrs,8mths	8.7 <sup>(d)</sup>	97.7
South Australia	8yrs,6mths	10yrs,6mths	3yrs,3mths	5yrs,3mths	79.5	93.7
Western Australia	8yrs,2mths	10yrs,2mths	2yrs,7mths	4yrs,7mths	90.0	91.7
Tasmania	9yrs,1mth	11yrs,0mths	3yrs,8mths	5yrs,8mths	95.0	94.9
Northern Territory	8yrs,8mths	10yrs,8mths	3yrs,3mths	5yrs,3mths	80.9	85.1
Australian Capital Territory	8yrs,8mths	10yrs,8mths	3yrs,6mths	5yrs,6mths	69.7	68.1

(a) The typical average age of students at the time of testing, expressed in years and months.

(b) The typical average time students had spent in schooling at the time of testing, expressed in years and months.

(c) The percentage of students from all schools who were assessed includes exempted students but not students absent or withdrawn by parents/ care-givers from the testing and not students attending schools which did not participate in the testing at all. The figure is calculated as a percentage of the total number of full-time government and non-government students based on data from the *National Schools Statistics Collection*.

(d) Queensland assessed a representative sample of students at the year 3 level – if population testing had been undertaken it is estimated 95% of the year 3 students would have been assessed.

**Table 7.4 Participation by school sector, 2000**

State or Territory	Percentage of assessed government school students <sup>(a)</sup>		Percentage of assessed non-government school students <sup>(b)</sup>		Proportion of assessed students (per cent)			
	Year 3	Year 5	Year 3	Year 5	Government school students <sup>(c)</sup>		Non-government school students <sup>(d)</sup>	
	Year 3	Year 5	Year 3	Year 5	Year 3	Year 5	Year 3	Year 5
New South Wales	94.5	94.8	90.1	90.4	73.9	72.6	26.1	27.4
Victoria	88.6	88.6	92.6	92.4	70.2	69.3	29.8	30.7
Queensland	8.7 <sup>(e)</sup>	97.6	8.7 <sup>(e)</sup>	97.7	76.7	75.8	23.3	24.2
South Australia	94.4	93.8	40.4	93.3	86.1	73.0	13.9	27.0
Western Australia	89.5	91.6	91.4	92.1	75.3	74.7	24.7	25.3
Tasmania	95.0	94.8	94.9	95.3	78.7	76.4	21.3	23.6
Northern Territory	80.2	85.4	84.0	84.1	80.2	79.7	19.8	20.3
Australian Capital Territory	95.2	94.9	17.0	18.4	92.0	90.5	8.0	9.5

(a) The percentage of assessed students from government schools includes exempted students, but not students absent or withdrawn by parents/ care-givers from the testing and not students attending schools that did not participate in testing at all. The figure is calculated as a percentage of the total number of full-time government students based on data from the *National Schools Statistics Collection*.

(b) The percentage of assessed students from non-government schools includes exempted students, but not students absent or withdrawn by parents/ care-givers and not students attending schools which did not participate in testing at all. The figure is calculated as a percentage of the total number of full-time non-government students based on data from the *National Schools Statistics Collection*.

(c) The percentage of assessed government school students compared with all assessed students.

(d) The percentage of assessed non-government school students compared with all assessed students.

(e) Queensland assessed a representative sample of students at the year 3 level – if population testing had been undertaken it is estimated that approximately 95% of the year 3 students from both government and non-government schools would have been assessed.

**Table 7.5 Exemptions, absences and participation of equity groups, by State and Territory, 2000**

State or Territory	Percentage of students exempted from testing <sup>(a)</sup>		Percentage of students absent or withdrawn <sup>(b)</sup>		Percentage of assessed students			
	Year 3	Year 5	Year 3	Year 5	Indigenous students <sup>(c)</sup>		LBOTE students <sup>(d)</sup>	
	Year 3	Year 5	Year 3	Year 5	Year 3	Year 5	Year 3	Year 5
New South Wales	1.2	1.1	5.0	4.8	3.7	3.6	23.5	22.6
Victoria	n.a.	n.a.	10.3	10.3	0.7	0.7	13.5	13.3
Queensland	1.4	1.3	2.9	1.9	8.7	6.0	6.8	7.8
South Australia	3.4	2.5	5.0	6.3	3.7	2.9	13.9	15.0
Western Australia	1.1	1.0	8.1	6.4	4.9	5.3	13.8	14.0
Tasmania	0.9	0.6	5.0	5.1	5.4	5.2	2.9	2.4
Northern Territory	3.7	2.2	19.1	14.9	23.0	23.9	27.6	29.4
Australian Capital Territory	3.0	3.4	4.4	4.6	2.0	1.3	6.5	5.5

n.a. not available

(a) The percentage of students who were exempted from the testing program in the relevant State or Territory. Exempted students are reported as not achieving the benchmark. The percentage of exempted students is calculated as a percentage of the total number of full-time government students based on *National Schools Statistics Collection* data, together with the non-government students who participated in the relevant State and Territory testing programs.

(b) The percentage of students who were absent or were withdrawn by parents/care-givers from the testing program in the relevant State or Territory. These students are not included in the benchmark calculations. The percentage of absent/withdrawn students is calculated as a percentage of the total number of full-time government students based on *National Schools Statistics Collection* data, together with non-government students who participated in the relevant State and Territory testing programs.

(c) The percentage of assessed Indigenous students. The percentage of Indigenous students includes exempted students and is calculated as a percentage of the total number of full-time government students based on data from the *National Schools Statistics Collection* and non-government students who participated in the relevant testing programs. The specific ways in which Indigenous student information was collected and/or categorised were characterised by a degree of variation across the jurisdictions.

(d) The percentage of assessed students with a language background other than English (LBOTE). The percentage of LBOTE students includes exempted students and is calculated as a percentage of the total number of full-time government students based on data from the *National Schools Statistics Collection* and non-government students who participated in the relevant State or Territory testing programs. The specific ways in which LBOTE information was collected and/or categorised were characterised by a degree of variation across the jurisdictions.

The use of confidence intervals with the benchmark results provides a way of making inferences about the achievement of students that reflects the uncertainty associated with the measurement of student ability. It is anticipated that statistical tests of significance, that further assist readers in making comparisons about students' achievements, will be incorporated into future reports. Until these technical improvements are implemented, readers are urged to be cautious when comparing results. The majority of students in each of years 3 and 5 attained the appropriate numeracy benchmark in 2000. As the benchmarks represent the minimum level required for a student to progress through schooling, this result is much as expected.

Since 2000 was the first year in which student performance was measured against numeracy benchmarks, it is not possible to make comparisons with previous years, but future editions of the *National Report on Schooling in Australia* will be able to note progress in this regard.

**Table 7.6 Percentage of students achieving the numeracy benchmark, by gender, years 3 and 5, Australia, 2000**

Cohort	Male students	Female students
Year 3	92.7 ± 2.1	92.8 ± 2.1
Year 5	89.4 ± 1.7	89.8 ± 1.8

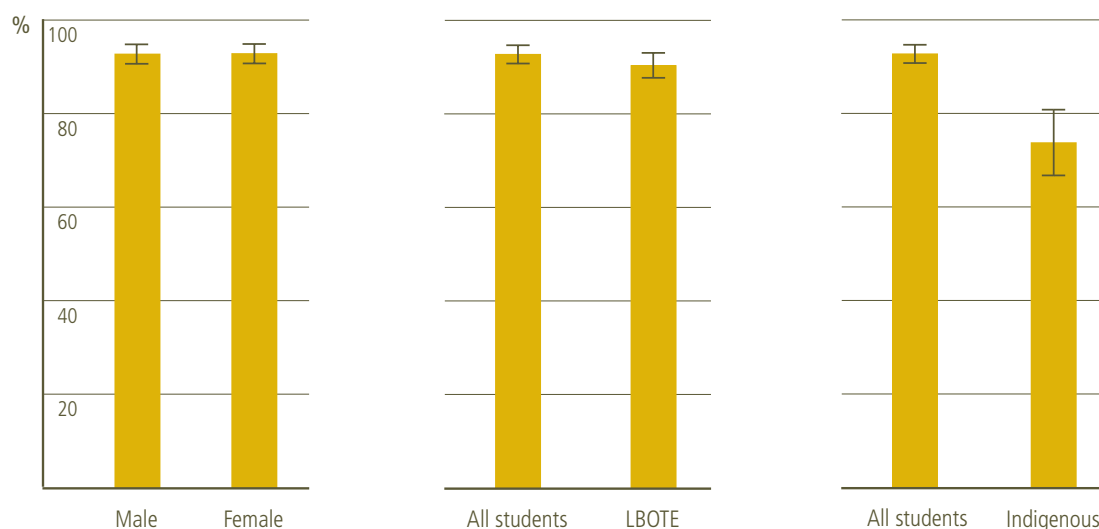
### Gender comparisons

As indicated in Table 7.6, there is no measurable difference between the relative performances of boys and girls. This contrasts with the situation in reading, where girls' performance is marginally better than boys.

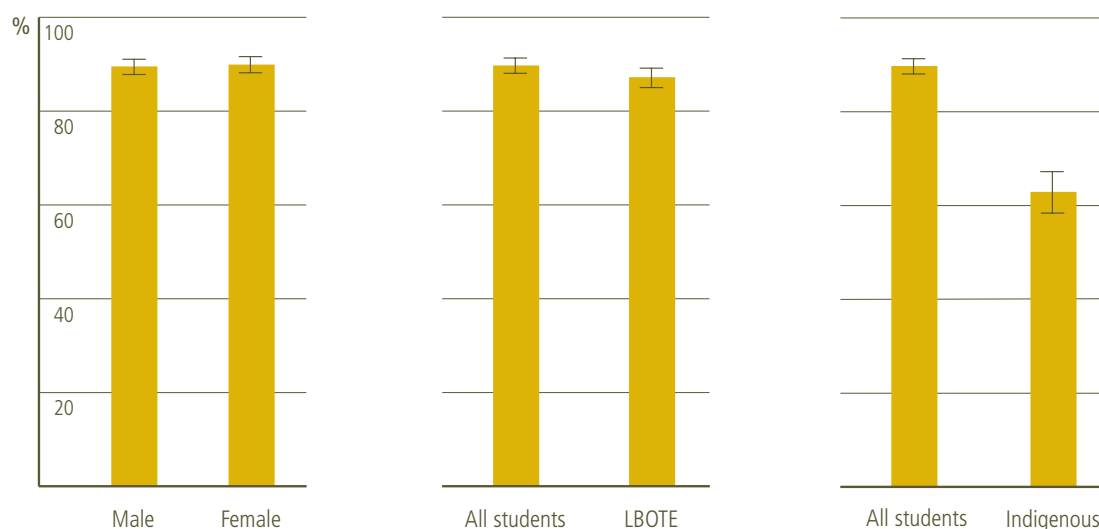
### Indigenous students

As indicated in Figures 7.1 and 7.2, there are substantial differences between the achievement of numeracy benchmarks by Indigenous students and all students.

**Figure 7.1 Percentage of year 3 students achieving the numeracy benchmark, by sub-group, Australia, 2000**



**Figure 7.2 Percentage of year 5 students achieving the numeracy benchmark, by sub-group, Australia, 2000**



## PISA 2000: Mathematical literacy

Australia is a participant in the Organization for Economic Co-operation and Development's (OECD) Program for International Student Assessment (PISA). PISA is a large-scale international assessment of the skills and knowledge of 15-year-old students that has been developed by the OECD. While the assessments have been developed primarily for OECD member countries, it is also possible for non-OECD countries to participate.

PISA assesses the performance of students in three domains: reading literacy, mathematical literacy and scientific literacy. The cycle of assessments commenced in the year 2000 and is scheduled to proceed at three-yearly intervals. Although all three domains are tested in each assessment, the major focus for 2000 was reading literacy. Mathematics will be the major focus in 2003 and science in 2006.

The term 'literacy' was adopted in order to reflect the breadth of knowledge, skills and competencies to be assessed. The need for mathematical literacy is generally recognised as being no longer confined to those relatively few people who will take up professions

in mathematics, science or engineering. Rather, it is considered that, in order to function fully in a world relying increasingly on technology, some knowledge of mathematics is required for employment, personal fulfilment and full participation in society.

Recognising this, mathematical literacy in PISA is defined as:

the capacity to identify, understand and engage in mathematics, and to make well-founded judgments about the role that mathematics plays in an individual's current and future private life, occupational life, social life with peers and relatives, and life as a constructive, concerned and reflective citizen.

## Results

Mathematical literacy was one of two minor domains assessed in PISA 2000, the other being scientific literacy. The assessment of mathematical literacy involved a total of 32 items, using a mixture of multiple choice, closed constructed responses and open constructed responses. Results for the domain are presented as scores on a single scale, which was constructed so that the mean score across all participating OECD countries was 500 with a standard deviation of 100.

As mathematical literacy was a minor domain for 2000, there was no attempt made to describe levels of proficiency. It is, however, possible to provide a broad description of performance in terms of the knowledge and skills that students need to demonstrate at various points on the scale. For example, students with a very high level of proficiency (that is, with scores of around 700 or more) are typically able to:

- interpret and formulate problems in mathematical terms
- handle several processing steps
- apply appropriate tools and knowledge
- use insight in finding a suitable solution to a problem
- employ high-order thinking and communicating skills to explain their results.

At the other end of the scale, students with low levels of proficiency (that is, with scores of around 380 or less) could generally:

- cope with only a single processing step (such as reproducing basic mathematical facts or processes)
- recognise familiar information presented in straightforward diagrams
- carry out simple computations.

## International results

Australia did very well in mathematical literacy – only students in Japan scored significantly higher on average. Eight other countries – including Korea, New Zealand, Canada and the United Kingdom – had mean scores not significantly different from Australia's, and a further 21 countries scored significantly lower (see Table 7.7). The United States was the only English-speaking country with a mean score below the OECD average of 500.

**Table 7.7 PISA 2000 – Student achievement in mathematical literacy by country**

Country	Mean score	Standard error
<b>Countries achieving significantly higher than Australia</b>		
Japan	557	(5.5)
<b>Countries with no significant difference from Australia</b>		
Korea	547	(2.8)
New Zealand	537	(3.1)
Finland	536	(2.1)
Australia	533	(3.5)
Canada	533	(1.4)
Switzerland	529	(4.4)
United Kingdom	529	(2.5)
Belgium	520	(3.9)
Liechtenstein*	514	(7.0)
<b>Countries achieving significantly lower than Australia</b>		
France	517	(2.7)
Austria	515	(2.5)
Denmark	514	(2.4)
Iceland	514	(2.3)
Sweden	510	(2.5)
Ireland	503	(2.7)
<b>OECD average</b>	<b>500</b>	
Norway	499	(2.8)
Czech Republic	498	(2.8)
United States	493	(7.6)
Germany	490	(2.5)
Hungary	488	(4.0)
Russian Federation*	478	(5.5)
Spain	476	(3.1)
Poland	470	(5.5)
Latvia*	463	(4.5)
Italy	457	(2.9)
Portugal	454	(4.1)
Greece	447	(5.6)
Luxembourg	446	(2.0)
Mexico	387	(3.4)
Brazil*	334	(3.7)

\* Denotes non-OECD country.

Source: Lokan, Greenwood and Cresswell, *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australia's Students?*, ACER 2001

**Table 7.8 PISA 2000 – Student achievement in mathematical literacy, by State and Territory**

			ACT	WA	NSW	Vic.	SA	Qld	Tas.	NT
	Mean		548.3	546.9	539.7	528.9	526.3	525.0	517.3	501.7
	Mean	SE	6.2	6.8	6.5	8.1	8.6	7.7	9.7	6.7
ACT	548.3	6.2		0	0	0	0	0	1	1
WA	546.9	6.8	0		0	0	0	0	0	1
NSW	539.7	6.5	0	0		0	0	0	0	1
Vic.	528.9	8.1	0	0	0		0	0	0	0
SA	526.3	8.6	0	0	0	0		0	0	0
Qld	525.0	7.7	0	0	0	0	0		0	0
Tas.	517.3	9.7	-1	0	0	0	0	0		0
NT	501.7	6.7	-1	-1	-1	0	0	0	0	

1 = Average performance statistically significantly higher than in comparison State.

0 = No statistically significant difference from comparison State.

-1 = Average performance statistically significantly lower than in comparison State.

Note: Read across the row to compare a State's performance with the performance of each State listed in the column headings. So to compare NSW's performance, the reader needs to find it in the left-hand column and then go across the row using the key above to compare with the States and Territories listed in the column headings. It will be seen that NSW shows no statistically significant difference from any State but performed significantly higher than the Northern Territory.

Source: Lokan, Greenwood and Cresswell, *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australia's Students?*, ACER 2001.

## State and Territory results

Table 7.8 shows that there were very few statistically significant differences between the average performance of students from the various States and Territories in terms of mathematical literacy.

## Student sub-group results

Internationally, boys performed better than girls in mathematical literacy in about half the countries that participated in PISA. In Australia, however, there was no statistically significant difference by gender. Nor were there any gender differences in mathematical literacy performance in any of the States or Territories.

As with reading literacy, PISA showed that Australian students from lower socioeconomic status (SES) backgrounds generally performed less well in mathematical literacy than students from higher SES backgrounds. However, the relationship was not as strong for mathematics as it was for reading, suggesting that

schools may play a larger role in the development of mathematics skills than they do in reading skills.

In contrast to Australia's results for reading and scientific literacy, in mathematical literacy there was no statistically significant difference in scores between students from English-speaking backgrounds and students from language backgrounds other than English. In addition, the data showed no difference in mathematical literacy results by location of school. Indigenous students, however, generally performed below their non-Indigenous peers in mathematical literacy, the mean score for Indigenous students being some 80 points lower than for non-Indigenous students.

## Other findings

In addition to student and school SES, important factors associated with the achievement of Australian students were time spent on homework, attitude to computers, use of memorisation strategies, use of techniques of elaboration of existing knowledge to promote their learning, school disciplinary climate, and teacher support and morale.





# Chapter 8

# Vocational education and training in schools

## Background

In September 1996, the Ministerial Council of the Australian National Training Authority (ANTA) agreed that \$20 million of ANTA funds be allocated each year to vocational education and training (VET) in government and non-government schools. The funding was made available over the four years 1997–2000 to assist the development and delivery of programs contributing to the expansion of vocational education in schools.

This funding, together with other funding provided by the Commonwealth, the States and Territories, has contributed to a significant change in the post-compulsory arena, involving a rapid growth in student numbers participating in VET in Schools programs and extensive coverage by schools. Significant discussions about the policy directions for VET in Schools have complemented this growth at the local level.

After the first two years of concentrated effort in this area, ministers at the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) in April 1999 agreed:

... that to support the achievement of the proposed National Goals relating to VET in Schools, the following elements be identified as priorities for action in the years 2001–2004, as the next phase of this key national initiative:

- the further expansion of VET in Schools and part-time New Apprenticeships for senior secondary students
- a focus on increasing the depth of student programs, resulting in higher levels of completion of modules, units of competence and AQF qualifications
- the coordination of work placements in industry and a continued focus on achieving quality in structured workplace learning programs
- recognition of the key role of industry and the need to facilitate greater employer involvement

in programs and enhanced partnership arrangements between schools, industry and VET providers at the national, State/Territory and local levels

- an emphasis on vocational learning in the compulsory years, particularly in years 9–10
- specific measures to address organisational and cultural change in schools and to develop cost-effective programs
- the development of new programs which provide for greater student choice in emerging occupations, eg in the services industry sector, and intervention strategies to address issues of under-provision, in specific industry areas and/or locations
- the introduction of specific strategies to improve access for students in rural and remote areas and for educationally disadvantaged students
- extended work on the integration of VET in senior secondary certificates, linking programs with training packages, providing support materials and training teachers to deliver programs
- the establishment of arrangements for the assessment of VET to provide a direct contribution to tertiary entrance scores in order to ensure that genuine pathways exist
- publicising the changes taking place in senior secondary education and raising the status of the VET in Schools pathways with parents, students and teachers
- developing a nationally consistent data collection on VET in Schools.

Twelve months later, the Ministerial Taskforce on VET in Schools proposed to ministers that work take place to develop a new framework for vocational education in schools. It further suggested that the new framework should be built on eight key elements underpinning successful transition to further education, training and employment for all students. The framework would not only encompass the

VET in Schools and school-based New Apprenticeships arrangements but also focus on vocational learning for students below years 11–12. Significant policy work has also been taking place through the Commonwealth’s Youth Pathways Action Plan Taskforce and the MCEETYA National Careers Taskforce.

In early 1998, ANTA and the Australian Curriculum, Assessment and Certification Authorities (ACACA) jointly developed principles to underpin the consistent application of the National Training Framework in secondary schools. These principles have been critical in developing arrangements in each State and Territory.

Late in November 1999, the ANTA Ministerial Council endorsed a set of recommendations for achieving greater recognition of achievement in VET in Schools courses by both industry and higher education. This work is particularly targeted at maintaining options for young people undertaking VET in Schools programs and establishing entry points into tertiary education for students who may wish to proceed to university.

## Progress

### Student participation

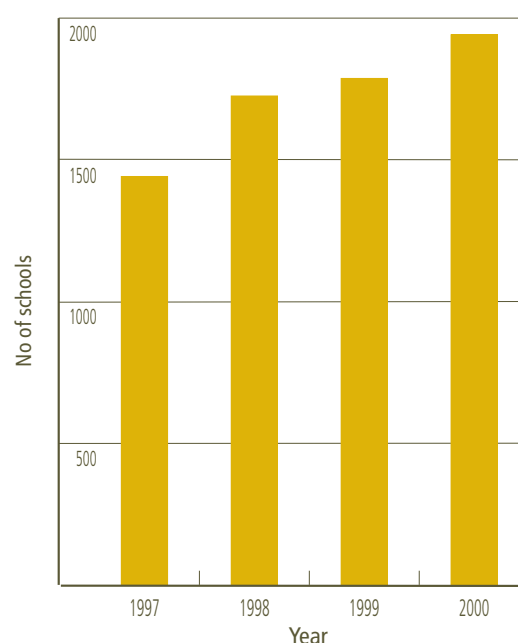
Table 8.1 shows the growth in student participation in VET in Schools programs in the period 1997–2000. Growth has occurred in all sectors of schooling and in every year of the funded period.

Overall, there was an increase of 256 per cent in the number of students participating in 2000, compared with the baseline year of 1996. Furthermore, it is evident from

Table 8.2 that the growth has occurred in all States and Territories.

The growth in participation is also evident in Table 8.3, which shows that there has been an increase in the number of schools offering VET in Schools programs. The increase has not been uniform across all States and Territories, nor has there been an increase in every sector in every State. However, there has been an increase in every State and Territory and, across Australia, in every sector. Overall, there has been a 33 per cent increase from 1997 to 2000.

**Figure 8.1 Number of schools providing VET in Schools programs, Australia, 1997–2000**



Source: *Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools*, VET in Schools Taskforce, July 2001

**Table 8.1 Number of students enrolled in VET in Schools programs, all sectors, Australia, 1997–2000**

	1997	1998	1999	2000
Government	74,110	88,985	104,698	113,586
Catholic	12,165	17,783	20,274	25,778
Independent	5,043	8,757	11,738	14,252
Total	91,318	115,525	136,710	153,616

Source: *Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools*, VET in Schools Taskforce, July 2001

**Table 8.2 Number of students enrolled in VET in Schools programs<sup>(a)(b)</sup>, by sector and State/Territory, 1997–2000**

State/Territory and sector	1997	1998	1999	2000
<b>NSW</b>				
Government schools	14,014	16,433	17,059	23,857
Catholic schools	4,258	4,855	4,239	7,952
Independent schools	350	674	1,717	1,292
TAFE	20,852	22,619	22,693	15,557
<b>Vic.</b>				
Government schools	7,674	8,813	9,319	12,247 <sup>(d)</sup>
Catholic schools	2,101	2,851	2,954	3,702 <sup>(d)</sup>
Independent schools	376	1,151	1,542	3,361 <sup>(d)</sup>
TAFE			72	47 <sup>(e)</sup>
<b>Qld</b>				
Government schools	23,550	22,934	29,261	31,515
Catholic schools	4,200 <sup>(c)</sup>	5,400 <sup>(c)</sup>	7,082	8,245
Independent schools	3,432	4,108	4,800	5,250
<b>SA</b>				
Government schools	2,417	8,907	12,046	15,660
Catholic schools	1,081	3,219	3,703	3,808
Independent schools	695	1,450	2,766	3,273
<b>WA</b>				
Government schools	1,991	3,828	7,168	7,478
Catholic schools	130	530	1,060	816
Independent schools	190	732	557	776
<b>Tas.</b>				
Government schools	1,496	1,969	2,378	2,932
Catholic schools	78	139	189	279
Independent schools	n.a.	25	37	84
<b>NT</b>				
Government schools	359 <sup>(c)</sup>	984	1,258	1,110
Catholic schools	52	124	126	120
Independent schools		48	163	119
<b>ACT</b>				
Government schools	1,757	2,498	3,444	3,183 <sup>(f)</sup>
Catholic schools	265	665	921	856 <sup>(f)</sup>
Independent schools		569	156	97 <sup>(f)</sup>
<b>AUSTRALIA</b>	<b>91,318</b>	<b>115,525</b>	<b>136,710</b>	<b>153,616</b>

n.a. not available.

Note:

(a) Statistics on school-based New Apprenticeships are not included in this table.

(b) This table is based on statistics provided by States/Territories and sectors. Comparisons on the range and levels of activity across States/Territories should not be made due to the fact that enrolments are recorded differently from State to State in relation to length of course and the degree to which structured learning and assessment occurs in the workplace. Accordingly, while an indicative total number of student enrolments across Australia can be provided, comparisons of growth with earlier years' statistics should only be made within individual States/Territories.

(c) Statistic is an estimate.

(d) Data provided by the Victorian Curriculum and Assessment Authority which represents an underestimate compared to DEET data.

(e) It is unknown whether these enrolments are adults or secondary students.

(f) The apparent decline in VET in Schools in the ACT is due to a change in the definition of 'enrolment' between 1999 and 2000. The 2000 total refers to the number of students enrolled in the VET programs and includes multiple enrolments by individual students.

Source: Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools, VET in Schools Taskforce, July 2001

**Table 8.3 Number of schools providing VET in Schools programs, by sector and State/Territory, 1997–2000**

State/Territory and sector	1997	1998	1999	2000
<b>NSW</b>				
Government schools	377	396	404	438
Catholic schools	150	150	77	105
Independent schools	29	38	82	116
<b>Vic.</b>				
Government schools	227	251	260	281
Catholic schools	69	80	82	83
Independent schools	32	44	63	76
TAFE			8	8
<b>Qld</b>				
Government schools	222	243	218	226
Catholic schools	70	75	73	75
Independent schools	56	71	79	80
<b>SA</b>				
Government schools	42	113	118	122
Catholic schools	21	27	27	28
Independent schools	13	19	26	29
<b>WA</b>				
Government schools	57	100	136	137
Catholic schools	19	24	33	32
Independent schools	13	23	26	28
<b>Tas.</b>				
Government schools	17	25	25	26
Catholic schools	4	5	5	5
Independent schools	n.a.	2	6	8
<b>NT</b>				
Government schools	10	12	15	15
Catholic schools	1	4	4	4
Independent schools	n.a.	4	4	3
<b>ACT</b>				
Government schools	8	8	8	8
Catholic schools	2	6	6	6
Independent schools	2	5	2	2
<b>AUSTRALIA</b>	<b>1,441</b>	<b>1,725</b>	<b>1,787</b>	<b>1,941</b>

n.a. not available.

Source: Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools, VET in Schools Taskforce, July 2001

## Coverage of industry areas

Throughout the initial funding period, some clear patterns of industry provision have emerged. In 2000, the following three industry areas accounted for more than half of the student enrolments in VET in Schools programs:

Tourism & Hospitality	21.2%
Business & Clerical	16.4%
Computing	13.6%

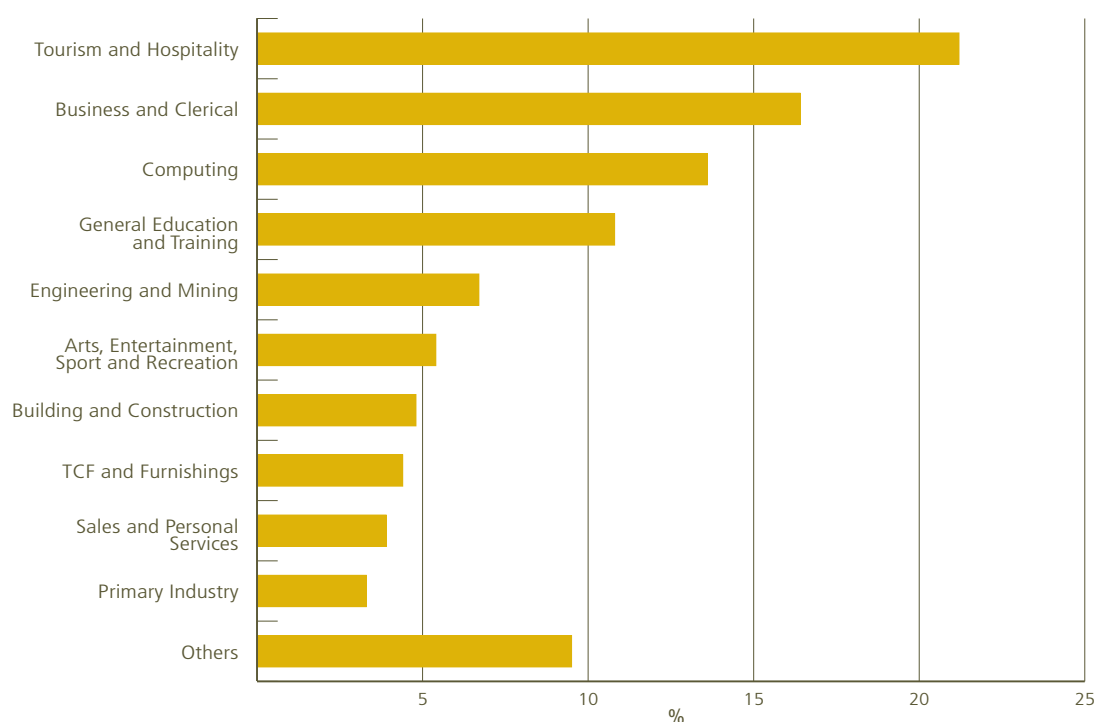
These, together with the following areas, provide for more than 90 per cent of all enrolments:

General Education & Training <sup>(a)</sup>	10.8%
Engineering & Mining	6.7%
Arts, Entertainment, Sport & Recreation	5.4%
Building & Construction	4.8%
Textiles, Clothing & Footwear & Furnishings	4.4%
Sales & Personal Services	3.9% <sup>(b)</sup>
Primary Industry	3.3%
Automotive	2.7%

- (a) The category 'General Education and Training' includes job seeking skills, personal development, workplace communication and Occupational Health and Safety.
- (b) The figure 3.9% for the category 'Sales and Personal Services' (which includes retail operations) is low compared to the number of students who commenced a school-based New Apprenticeship in this area in the year 2000 (see Table 8.10). This is due to several unresolved issues in some States and Territories requiring further work in order for retail to become a more workable VET in Schools option.

Source: Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools, VET in Schools Taskforce, July 2001

**Figure 8.2 VET in Schools enrolments, ten main ANTA industry groups, government and Catholic schools, Australia, 2000 (per cent)**



Source: Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools, VET in Schools Taskforce, July 2001

**Table 8.4 Enrolments in VET in Schools programs, by ANTA industry groups, government and Catholic schools, by State/Territory, 2000 (per cent)**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
<b>CATEGORY A</b>									
Arts, Entertainment, Sport & Recreation	4.0	19.5	2.9	9.6	5.7	12.3	7.7	4.4	5.4
Automotive	3.8	6.8	0.0	2.1	6.1	4.8	4.2	9.6	2.7
Building & Construction	8.1	2.1	4.1	1.5	3.5	2.3	4.0	5.5	4.8
Community Services, Health & Education	5.3	2.7	0.9	3.6	7.2	9.6	5.0	5.6	3.2
Finance, Banking & Insurance	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Food Processing	0.0	0.1	0.0	0.5	0.3	0.0	0.0	0.2	0.1
TCF & Furnishings	2.4	1.9	7.3	1.7	2.1	0.0	0.0	2.4	4.4
Communications	0.0	0.0	0.0	0.0	1.0	4.8	3.2	3.1	0.3
Engineering & Mining	4.0	4.2	9.2	4.6	9.7	1.3	6.1	3.5	6.7
Primary Industry	3.6	4.9	1.9	5.0	9.6	3.8	4.1	0.0	3.3
Process Manufacturing	0.0	0.0	1.0	0.0	0.0	2.6	0.0	0.0	0.5
Sales & Personal Services	8.5	1.6	0.6	4.5	7.6	13.4	1.4	3.4	3.9 <sup>(b)</sup>
Tourism & Hospitality	32.4	20.6	15.5	20.7	15.9	10.3	18.5	21.6	21.2
Transport & Storage	0.5	0.0	0.0	0.1	1.1	0.7	1.2	0.0	0.2
Utilities	2.1	0.0	0.0	0.0	1.9	0.0	0.1	0.0	0.6
<b>CATEGORY B</b>									
Business & Clerical	14.2	13.0	19.9	14.6	13.1	4.7	25.6	9.6	16.4
Computing	10.6	19.6	14.6	14.7	4.2	0.0	7.8	28.3	13.6
Science, Technical & Other	0.0	2.9	0.0	0.0	1.3	0.0	0.9	2.8	0.5
<b>CATEGORY C</b>									
General Education & Training <sup>(a)</sup>	0.0	0.0	19.4	16.8	9.6	19.7	10.5	0.0	10.8
Not classified	0.0	0.0	2.8	0.0	0.0	9.8	0.0	0.0	1.4

(a) The category 'General Education and Training' includes job-seeking skills, personal development, workplace communication and Occupational Health and Safety.

(b) The figure 3.9% for the category 'Sales and Personal Services' (which includes retail operations) is low compared to the number of students who commenced a school-based New Apprenticeship in this area in the year 2000 (see Table 8.10). This is due to several unresolved issues in some States and Territories requiring further work in order for retail to become a more workable VET in Schools option.

Source: Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools, VET in Schools Taskforce, July 2001

## Annual student contact hours

Measurement of the number of annual student contact hours for which students participate in VET in Schools courses (VET hours) provides an indication of the depth of the study. It is often difficult to compare activity across States/Territories and across sectors, as there is a range of reasons for the structure and length of programs in each State/Territory. Nevertheless, Tables 8.5 and 8.6 provide a basis for comparison in that the numbers of students and depth of progress can be compared. Some States/Territories have high levels of participation, but lower average levels of VET hours, while others have lower overall numbers but higher levels of VET hours.

Given that 153,616 students undertook VET in Schools programs across Australia in 2000, accounting for approximately 27 million annual student contact hours, it is estimated that the average length of a VET in Schools program in 2000 was 177 hours.

The overall growth in participation in VET in Schools is summarised in Table 8.7. In particular, it indicates that VET in Schools

enrolments as a percentage of total enrolments in years 11 and 12 have risen from 16 per cent in 1996 to 38 per cent in 2000.

**Table 8.5 VET in Schools average annual student contact hours, by State/Territory, 2000**

State/Territory	Average annual contact hours
New South Wales	115
Victoria	225
Queensland	262
South Australia	80
Western Australia	170
Tasmania	214
Northern Territory	211
Australian Capital Territory	153
Australia	177

Source: Derived from Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools, VET in Schools Taskforce, July 2001



**Table 8.6 VET in Schools annual student contact hours and enrolments<sup>(a)(b)</sup>, by sectors and States/Territories, 2000**

State/Territory and sector	Annual student contact hours	Enrolments
<b>NSW</b>		
Government schools	2,657,243	23,857
Catholic schools	886,116	7,952
Independent schools	145,719	1,292
TAFE	1,908,202	15,557
<b>Vic.</b>		
Government schools	3,360,215	12,247 <sup>(c)</sup>
Catholic schools	979,954	3,702 <sup>(c)</sup>
Independent schools	575,559	3,361 <sup>(c)</sup>
TAFE	17,251	47 <sup>(d)</sup>
<b>Qld</b>		
Government schools	8,240,000	31,515
Catholic schools	1,893,301	8,245
Independent schools	1,581,363	5,250
<b>SA</b>		
Government schools	1,249,780	15,660
Catholic schools	324,721	3,808
Independent schools	240,294	3,273
<b>WA</b>		
Government schools	1,389,293	7,478
Catholic schools	102,000	816
Independent schools	58,053	776
<b>Tas.</b>		
Government schools	627,448	2,932
Catholic schools	58,109	279
Independent schools	17,976	84
<b>NT</b>		
Government schools	223,803	1,110
Catholic schools	38,452	120
Independent schools	22,914	119
<b>ACT</b>		
Government schools	496,980	3,183
Catholic schools	123,310	856
Independent schools	11,550	97
<b>AUSTRALIA</b>	<b>27,229,606</b>	<b>153,616</b>

(a) Statistics on school-based New Apprenticeships are not included in this table.

(b) This table is based on statistics provided by States/Territories and sectors. Comparisons on the range and levels of activity across States/Territories should not be made due to the fact that enrolments are recorded differently from State to State in relation to length of courses and the degree to which structured learning and assessment occurs in the workplace. Accordingly, whilst an indicative total number of student enrolments across Australia can be provided, comparisons of growth in earlier years' statistics should only be made within individual States/Territories.

(c) Data provided by the Victorian Curriculum and Assessment Authority which represents an underestimate compared to DEET data.

(d) It is unknown whether these enrolments are adults or secondary students.

Source: Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools, VET in Schools Taskforce, July 2001

**Table 8.7 Growth in participation in VET in Schools, Australia, 1996–2000**

	1996	1997	1998	1999	2000
Year 11–12 projected enrolments for Australia (DETYA statistics)	371,333	389,155	393,846	403,323	406,850
VET in Schools enrolments	60,000	91,318	115,525	136,710	153,616
Percentage of year 11–12 enrolments	16%	24%	29%	34%	38%
Number of annual student contact hours (hours in millions)			13.052 m	20.097 m	27.230 m
Average number of annual student curriculum hours per student			110 hrs	147 hrs	177 hrs

Source: Derived from Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools, VET in Schools Taskforce, July 2001

## Participation in structured workplace learning

Table 8.8 shows the number of students participating in workplace learning in 2000, while Figures 8.3 and 8.4 show the growth in numbers participating and workplace learning hours respectively. It is important to note that not all students

undertake work placement in VET in Schools programs. As well, not all work placement strictly qualifies as structured workplace learning.

The data demonstrate that participation in structured workplace learning is increasing at about the same rate as VET in Schools and that approximately 53 per cent of all students engaged in VET programs are participating in structured work placements.

**Table 8.8 VET in Schools workplace learning by student enrolments and workplace learning hours, by sector and State/Territory, 2000**

State/Territory and sector	Number of students	Number of workplace learning hours
<b>NSW</b>		
Government schools	21,944	914,067
Catholic schools	6,629	282,155
Independent schools	1,181	45,621
<b>Vic.</b>		
Government schools	8,783	687,378
Catholic schools	2,000 <sup>(a)</sup>	200,000 <sup>(a)</sup>
Independent schools	n.a.	n.a.
<b>Qld</b>		
Government schools	10,104	772,322
Catholic schools	2,950	383,500
Independent schools	2,336	155,894
<b>SA</b>		
Government schools	9,000	639,000
Catholic schools	686	96,040
Independent schools	681	81,720
<b>WA</b>		
Government schools	7,478	1,433,080
Catholic schools	964	150,000
Independent schools	623	38,887
<b>Tas.</b>		
Government schools	2,932	397,810
Catholic schools	262	43,782
Independent schools	84	7,336
<b>NT</b>		
Government schools	161	13,880
Catholic schools	5	380
Independent schools	29	1,960
<b>ACT</b>		
Government schools	1,643	65,720
Catholic schools	524	57,640
Independent schools	48	1,920
<b>AUSTRALIA</b>	<b>81,047</b>	<b>6,470,092</b>

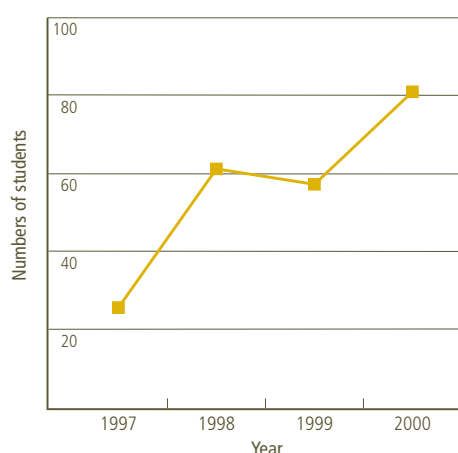
n.a. not available.

Note: Statistics on school-based New Apprenticeships are not included in this table.

(a) Statistic is an estimate.

Source: Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools, VET in Schools Taskforce, July 2001

**Figure 8.3 Students in structured workplace learning, all sectors, Australia, 1997–2000 ('000)**

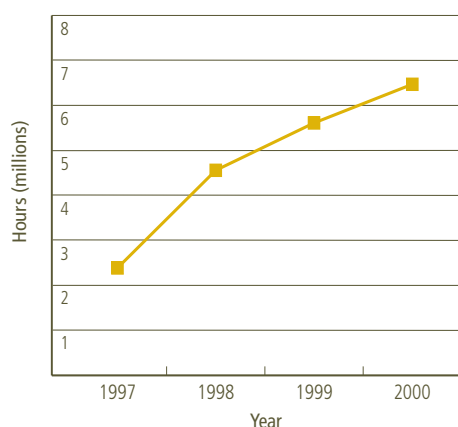


Note: The fall in the number of students participating in work placement from 1998 to 1999 is due to two factors:

1. 1998 data for Queensland, that was unavailable at the time of compiling the 1999 report to ministers, has now been included.
2. In 1999, jurisdictions began to report participation in workplace learning is in accordance with the defining criteria of structured workplace learning. In previous years students who were involved in programs such as work experience were also included in the data collection.

Source: *Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools*, VET in Schools Taskforce, July 2001

**Figure 8.4 Student workplace learning hours, all sectors, Australia, 1997–2000 (hours in millions)**



Note: The fall in the number of students participating in work placement from 1998 to 1999 is due to two factors:

1. 1998 data for Queensland, that was unavailable at the time of compiling the 1999 report to ministers, has now been included.
2. In 1999, jurisdictions began to report participation in workplace learning is in accordance with the defining criteria of structured workplace learning. In previous years students who were involved in programs such as work experience were also included in the data collection.

Source: *Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools*, VET in Schools Taskforce, July 2001

## Part-time New Apprenticeships for school students

By December 2000, State/Territory government and non-government sectors reported that 5,957 training agreements were in operation, of which 4,288 commenced in 2000. This represents strong growth over the period 1998–2000, as is illustrated in Table 8.9. Table 8.10 shows how these school-based New Apprenticeships are distributed across ANTA industry groups. It is apparent that, while programs range across a large number of industry areas, the majority of students are employed in Sales and Personal Services, Tourism and Hospitality, Business and Clerical, Primary Industry, Automotive, and Engineering and Mining.

## Other developments

During the initial period of funding for VET in Schools programs a number of other important developments occurred. These included the following:

- A nationally agreed set of principles was prepared to guide the development of VET in Schools programs and part-time New Apprenticeships for school students.
- Policies and procedures for the implementation of the National Training Framework within the secondary school sector by State/Territory authorities and ACACA were developed.
- VET in Schools programs for senior students expanded to encompass virtually all industry areas and to include programs from Australian Qualifications Framework (AQF) Level I to AQF Level III.
- There was a substantial increase in the number, range and quality of innovative partnerships and networks between schools, industry, Registered Training Organisations (RTOs), enterprises and communities that are providing structured support to workplace learning.

**Table 8.9 Number of secondary students who commenced a school-based New Apprenticeship, 1998–2000**

Year	1998	1999	2000
Number of students in training	1,591	3,994	5,957

Source: *Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools*, VET in Schools Taskforce, July 2001

**Table 8.10 Number of secondary school students commencing, and in training, a school-based New Apprenticeship, by ANTA industry group, 2000**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
<b>CATEGORY A</b>									
Arts, Entertainment, Sport & Recreation	0	21	70	1	0	0	0	0	92
Automotive	0	45	171	29	0	0	3	12	260
Building & Construction	3	0	122	1	0	0	1	19	146
Community Services, Health & Education	1	8	85	0	2	2	0	2	100
Finance, Banking & Insurance	0	0	0	0	0	0	0	0	0
Food Processing	0	5	17	8	0	0	1	11	42
TCF & Furnishings	0	0	56	0	4	0	0	0	60
Communications	0	0	1	0	0	0	0	6	7
Engineering & Mining	23	21	159	1	27	0	0	0	231
Primary Industry	37	89	178	14	18	0	0	0	336
Process Manufacturing	0	0	0	0	0	0	0	0	0
Sales & Personal Services	40	113	548	285	50	0	4	0	1,040
Tourism & Hospitality	50	112	495	43	50	3	1	27	781
Transport & Storage	0	0	22	0	0	0	0	0	22
Utilities	0	0	1	1	0	0	0	0	2
<b>CATEGORY B</b>									
Business & Clerical	58	59	279	4	78	0	2	1	481
Computing	9	13	121	1	5	1	0	16	166
Science, Technical & Other	0	0	14	0	0	0	0	0	14
<b>CATEGORY C</b>									
General Education & Training	0	0	14	0	0	0	0	0	14
Not classified	0	0	480 <sup>(a)</sup>	1	0	0	0	0	481
TOTALS	221	486	2,842	389	238	6	12	94	4,288
Students in training December 2000	426	841	3,687	553	294	30	12	114	5,957

(a) The Queensland Catholic Education Commission reported a total of 480 commencements but did not categorise them.

Source: Report of the MCEETYA Taskforce on Vocational Education and Training (VET) in Schools, VET in Schools Taskforce, July 2001

- A range of consultative arrangements involving the schools and training sectors and industry was established in all States/Territories across the three school sectors. These arrangements have supported the coordination of VET provision at the State/Territory level, in the government and non-government sectors, as well as providing advice to relevant stakeholders concerning issues related to VET in Schools.
- Education authorities and industry groups worked closely to develop and implement projects that stimulate interest in industry areas with significant skills shortages and employment opportunities. Such industries include engineering, retail, automotive, furnishing, agriculture and horticulture.
- In each State and Territory, VET subjects, modules or units of competence were integrated into the senior secondary school curriculum.
- All States and Territories made significant progress with regard to the implementation of training packages as the basis of VET in Schools programs. The training packages are being implemented progressively, as determined by State/Territory Training Authorities.

- Work was begun towards reaching national agreement on a set of core key performance measures for access, participation and completion for the purposes of nationally comparable reporting for VET in Schools programs for the period 2001–04.

## The national evaluation of ANTA's VET in Schools Programme

During 2000, ANTA commissioned the Allen Consulting Group to evaluate the ANTA VET in Schools Programme. The evaluation focused on the role of ANTA funding in facilitating the development of VET in Schools activity. The Allen Consulting Group reported to ANTA in June 2000.

The report concluded that, over the past four years, VET in Schools had become an important feature in the landscape of offerings in senior secondary schooling. The report also stated that there seemed little doubt that the ANTA programme was influential in this, particularly in driving development within a national framework. However, it concluded that the transition was far from complete and that many key aspects were still evolving into the forms and processes that would meet the expectations of stakeholders.

The authors of the report claimed that, essentially, sustainability would have been achieved when VET in Schools, delivered within a national framework, became a routine part of resourcing, operations and culture at the school level and independent of any funding supplement from ANTA. They believed that, at this stage, there were six key characteristics of sustainability for VET in Schools, and they assess the program in terms of the status of each of these at the time of the evaluation, as follows.

- Initial set-up infrastructure: Substantial progress has been made and, in some systems, the setting-up phase (training of a corps of teachers, developing a suite of support materials, etc.) is largely, though not totally, complete.
- Absorption into schools' and systems' recurrent budgets: This has not been achieved as yet although these issues are being addressed.
- Adjustment to schools' operation and culture: Indications are that this varies, though it is recognised that there are some innovative local models. However, the judgement of the evaluators was that there is still a need for concentrated effort in the future.
- Certification and tertiary entrance: These issues are not yet resolved and will require more attention and national resolution to gain the confidence of students, their families and employers.
- Efficient delivery: Implementation varies and there is a need for agreement to be developed on costs and benchmarks for efficiency.
- Links to industry made routine: The evaluation indicated that links with employers need further development before sustainable outcomes are achieved and that support for workplace learning/coordination will need to continue.

## Case studies of VET in Schools programs

Many features of VET in Schools programs are illustrated in the following case studies:

- Prince Alfred College – answering questions on the implementation of VET in an independent school
- Hobart College – implementing VET in one of Tasmania's senior secondary colleges.

### Prince Alfred College, South Australia

Following are some answers to frequently asked questions on the implementation of VET in an independent school.

#### Why?

##### Because it meets many students' needs

There have been numerous articles published recently on the shortcomings of traditional secondary school course offerings and the need to keep youth, especially 15-year-old males, in meaningful education. Traditionally, all-boys schools don't face the coeducational classroom issues of girls and boys maturing socially and intellectually at different rates. The main issues at an all-boys school relate to post-compulsory education – years 11 and 12.

Parents and staff, as well as the students, naturally want the very best for their future. This usually implies a university career path in one of the highly regarded professions. However, not all boys are the same and at some stage some parents or boys or subject counsellors realise that specific students are not suited to the traditional maths–science pattern in South Australian Certificate of Education (SACE) 1 and SACE 2. In the late 1980s, the School Assessed Subjects courses were introduced to meet the needs of such students, but they have evolved and have remained largely academic with a research emphasis.

VET courses, with their diversity and practical, skills-based emphasis, clearly meet the needs of students not suited to an immediate post-school university pathway.

The main challenge has been to promote VET as a career path that is as valid as traditional career (tertiary) paths. This moves the focus to the boys' abilities, interests and characters first, rather than working backwards from a school's preferred subject pattern or parents' aspirations for their sons.

## How?

### Start small and do it well

In 1999, Prince Alfred College (PAC) began by offering one module in multimedia and supported several boys in a work placement program. It is unavoidable to begin delivering VET in a small way. In-service training is time-consuming and costly, as is deciding what courses to deliver and how and when they should occur. Most schools allocate a small amount of time to teachers to pilot VET programs that evolve in line with need. We believe that where schools have a VET coordinator (0.5 to full time) VET has flourished.

In our experience, attending VET seminars and sharing ideas by networking with others has probably been the single most inspiring and effective way for gaining the insights required to implement VET at PAC.

### Find someone who's passionate!

A VET coordinator should be passionate about VET and be keen to establish links and clusters with a whole range of schools, service organisations and RTOs in order to promulgate VET. Learning the VET jargon, investigating courses and RTOs, convincing colleagues, faculties and others to embrace the relevance of VET for students has been hard work. But the

progress and success of the participants is affirmation of VET as a career path option in secondary schools.

## Where?

### Initially, location doesn't really matter

The main thing is to get students started. Of course PAC is keen to deliver courses and modules on campus but since the boys' choices and needs come first, they can attend a variety of offline courses at a range of locations. In the same way, PAC hosts many students from other schools from within the local school cluster who wanted to pursue multimedia. This is a quick way to get students involved in VET, allows teachers to do the training and preparation for delivery, and augments flexible thinking about achieving career paths.

## When?

### Get friendly with the timetabler

Most students who take stand-alone VET drop a traditional subject to do so. Where possible, and as numbers reached a minimum class size, the Deputy Principal at PAC, who also happens to be the timetabler, created a subject line called Work Education.

In this period students are able to check progress and work placement details with me, fill out logbooks, catch up on homework and access computers in a supervised environment. The day with the double lesson of Work Education was also nominated for work placements so that there was minimum disruption to the boys' participation in other subjects.

The creation of a real subject on a timetable line has also given VET greater credibility in the school – Work Education is a subject choice, not an informal last-minute option.

## What?

### Always meet the needs of the students

At PAC, staff are currently offering three modules in Interactive Multimedia, two in Sport and Recreation and the Illustration module of Digital Design.

Certificate II Electronics will begin in Semester 2, 2001. Students are currently participating in Hospitality, Retail, Automotive Engineering, Business Studies, Aquaculture, Agriculture and



Viticulture offline through a range of RTOs and cluster arrangements.

### Be pragmatic

Look at the infrastructure of the school, including staff expertise, buildings and facilities. Introducing new offline courses enables more flexible delivery with less impact on the existing timetable. This allows students of all academic abilities and interests the opportunity to participate in VET programs. It also allows for greater participation across the school cluster, thus pooling expertise and facilities.

### Who?

#### Whoever is qualified

Bearing in mind the need to deliver industry-standard competencies, we have tried to use school staff wherever possible. They understand the school students, the school routines and demands and they possibly see the relevance to their faculty. Failing this, freelance lecturers are employed (eg Electronics, Sport and Recreation) school cluster links utilised.

### Meeting industry standards

Getting freelance tutors at a price may be a better use of available funds than providing in-service training for well-meaning teachers whose level of expertise may never be as competent or current. Colleagues are encouraged to attend, even enrol in, the courses delivered by industry-based trainers.

Work Education at the school uses two different programs, for which the RTO delivers both training and work placements. These are both excellent.

The mysteries of the New Apprenticeship Scheme are beginning to unravel. It doesn't seem to be widely understood or implemented at the secondary school level for logistical and economic reasons. We have been actively pursuing agriculture-based New Apprenticeships for boarders from rural backgrounds. This is an attempt to encourage boarders to return home after their secondary schooling and thus assist in stemming the rural brain drain.

VET is now providing alternative career paths for students at PAC. This is a reflection of society at large. The flexible and multifaceted nature of VET delivery is changing, and will continue to change, the nature of traditional schooling.

## Hobart College, Tasmania

This initiative was directed to year 11 and 12 students at Hobart College.

### Background

Hobart College was founded in 1913 as a high school, which makes it one of Tasmania's oldest educational institutions. It became a senior secondary college catering exclusively for years 11 and 12 students in 1965. The college is located on Mt Nelson, only a few kilometres from the city, and has a student population of just over 1,300.

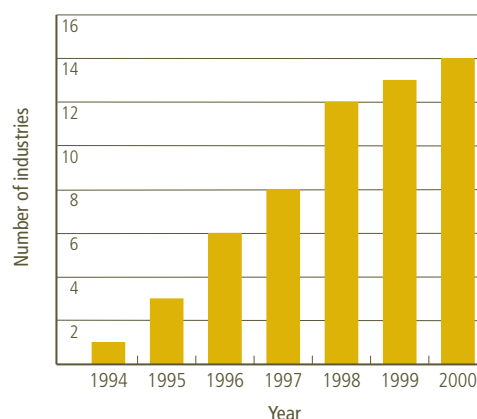
The college first registered as a private training provider in 1994 and in 1999 became registered under the Australian Recognition Framework as a Quality Endorsed RTO.

### Outline of initiative

Student enrolment in, and diversity of VET courses offered by the college has increased steadily to a total of 279 full-time enrolments in 2000, in 14 industry areas. The number of students undertaking VET programs with structured workplace learning represents 27 per cent of the total full-time college enrolment.

VET was introduced to meet the needs of students requiring an alternative to university study as a future pathway. In selecting courses, significant attention was paid to industries where employment growth was likely to occur, for example retail, tourism, hospitality, information technology, aquaculture and horticulture.

**Figure 8.5 VET enrolments, by industry area, 1994–2000, Hobart College**



The Department of Education conducted numerous 'Search Conferences' with key industry associations, training providers, unions and Industry Training Boards in all industry areas represented in Tasmania. Hobart College's involvement enabled the development of appropriate curricula to suit the needs of both industry and young people. In 2000, the college offered registration in 14 areas supporting 41 qualifications. Students were individually counselled in their selection and registration of courses. The college also ensured that all VET students completed a first aid certificate course, which forms part of an Occupational Health and Safety awareness program.

Trainee partners included:

- Tasmanian Fishing Industry Training Advisory Board
- Continuing Education and Training Committee for the Huon Valley
- Australian Maritime College
- Tasmanian Communities On-Line.

## Changes to college organisation to cater for program

The college altered its timetable to facilitate access to programs and enhance the delivery of VET. Both on- and off-the-job training was conducted to minimise interruptions to other courses being studied. Students undertake a maximum of 30 days of structured vocational placement. Training in a one-day block ensured the college program was accessible to people with part-time enrolments or jobs. Timetabling all VET on one day also allowed the organisation of cross-program activities, such as guest speakers, excursions and sharing of trainer expertise.

## Evaluation and outcomes for students

To ensure that the college VET programs meet students' needs, the college conducts client feedback surveys each year. Surveys target the students and employers in the programs. The results of these surveys are used to provide continuous improvement of both the services offered to students and the support given to employers who provide vocational placements. Client feedback surveys for 2000 indicate that:

- 97 per cent of students found that the program that they had enrolled in met their expectations
- 98 per cent of employers were satisfied with the program and were willing to continue with vocational placements
- 68 per cent of students gained employment
- 21 per cent of students went on to further training
- 25 per cent of those who gained employment also gained an apprenticeship/traineeship.

In 2000, 75 per cent of employed VET students entered the industry areas in which they did their college training – indicating that the training offered by the college is meeting the needs of industry.

All VET teachers received professional development in training package use and were supported by the provision of relief, to enable their attendance at specific industry sessions with other VET providers and industry personnel. All training staff have received the assessor qualifications to enable them to assist workplace supervisors to provide for the assessment of competencies in the workplace.

## Chapter 9

# Science student outcomes

## Introduction

By including science in the first stage of the development of national reporting of comparable educational outcomes, ministers have acknowledged the importance of science education. Ministers were aware that there was no appropriate reporting framework being used at a national level in Australia, and charged the National Education Performance Monitoring Taskforce (NEPMT) with the task of establishing performance measures that could be used for this purpose. This section of the report looks at the progress made in 2000 to construct a monitoring and reporting framework that will be used to report progress in science education in future editions of the *National Report on Schooling in Australia* and to report the results of two international studies. It also contains some case studies relevant to the science key learning area.

## Performance measures

The taskforce began investigating the establishment of performance measures in the areas of:

- student achievement outcome data in science
- student participation in the science key learning area.

Subsequently, the development of measures of student learning outcomes became its primary focus. As at the end of 2000, the taskforce had not made a final decision on whether to include participation as a performance indicator. In terms of achievement outcomes it is intended that the framework to be developed will enable nationally comparable reporting on a regular basis and that data collected will be capable of disaggregation into appropriate sub-groups. It is also intended that the framework will enable comparison over time, so that trends and developments can be identified.

Following discussions in a sub-group established by the taskforce to address the ministers' requirement to develop performance measures in science, the taskforce concluded that, while there were some differences in science curricula among the States and Territories, there was an underlying commonality across the country in terms of primary science concepts. It determined that any differences in curricular frameworks could be accommodated in an assessment process developed for national reporting purposes. It also expressed a preference for a 'scientific literacy' approach to measuring the ability of students to apply their skills

and knowledge in situations they are likely to encounter in the world outside the school, rather than simply assessing their recall of material prescribed by their school curricula.

Also, as a result of sub-group discussion it was decided to develop nationally comparable measures of science achievement for both primary and secondary years.

## Measuring student achievement: international studies

In considering what monitoring might be appropriate and necessary at the secondary level, the sub-group looked first at two major international studies in which Australian secondary science students have participated over recent years:

- Organization for Economic Co-operation and Development's (OECD) Program for International Student Assessment (PISA)
- Third International Mathematics and Science Study (TIMSS).

## PISA

PISA is a large-scale international assessment of the skills and knowledge of 15-year-old students that has been developed by the OECD. While the assessments have been developed primarily for OECD member countries, it is also possible for non-OECD countries to participate.

PISA assesses the performance of students in three domains: reading literacy, mathematical literacy and scientific literacy. The cycle of assessments began in the year 2000 and is scheduled to proceed at three-yearly intervals. Although all three domains are tested in each assessment, the major focus in 2000 was reading. Mathematics will be the major focus in 2003 and science in 2006.

The term 'literacy' was adopted in order to reflect the breadth of knowledge, skills and competencies to be assessed. PISA defines 'scientific literacy' as:

The capacity to use scientific knowledge, to identify questions and to draw evidence-based conclusions in order to understand and help make decisions about the natural world and the changes made to it through human activity.

It comprises three aspects:

### 1 Scientific processes

These are mental or physical actions used in conceiving, obtaining, interpreting and using evidence or data to gain knowledge or understanding, and include:

- recognising scientifically investigable questions
- identifying evidence needed in scientific investigation
- drawing or evaluating conclusions
- communicating valid conclusions
- demonstrating understanding of scientific concepts.

### 2 Scientific concepts

These help us to make sense of the natural and human-made world. They include biological, physical, earth, space and chemical sciences:

- science in life and health
- health, disease and nutrition
- maintenance of and sustainable use of species
- interdependence of physical and biological systems
- science in earth and environment
- pollution
- production and loss of soil
- weather and climate
- science in technology
- biotechnology
- use of materials and waste disposal
- use of energy
- transportation.

### 3 Contexts or settings

The PISA approach focuses on assessing the ability of students to apply the skills and knowledge they have acquired by the end of compulsory schooling in 'real life' situations they are likely to encounter outside the school. This is preferred to an approach that confines assessment to students' recall of the defined body of material covered in the curriculum.

The PISA approach to assessing scientific literacy has been endorsed by the Australian National Advisory Committee for the project.

## PISA 2000

PISA 2000 was conducted internationally by a consortium led by the Australian Council for Educational Research (ACER). The national project manager for Australia was also ACER, and the project was monitored in Australia by a national advisory committee on which all school education jurisdictions were represented, as well as the Commonwealth, subject experts in reading, mathematics and science and representatives of school education interest groups.

Following a trial survey in 1999, the main round of assessments for the first cycle of PISA took place during 2000 with some 30 countries taking part, including the US, Canada, Japan, Korea, and most western European countries. While most northern hemisphere countries tested in the first half of the year, Australia's testing took place in July and August 2000, to ensure that students in all countries were at the same stage in their school year when testing occurred.

Approximately 6,000 15-year-old students in 231 schools, from both government and non-government sectors, in all States and Territories, participated in Australia. To ensure reliability of data at State level, schools were oversampled in the smaller States and Territories. In addition, oversampling of Indigenous students was undertaken in order to provide reliable results for this group.

PISA set very high response rates to ensure that results could be published without qualification. Australia met these stringent international requirements.

Each participating student completed a two-hour assessment and a 20–30 minute questionnaire designed to provide personal contextual information. Some of the test booklets received by Australian students included a selection of items from TIMSS to enable Australia to compare its PISA results with its results from the Third International Mathematics and Science Study–Repeat (TIMSS-R) in 1998, although the analysis of this additional booklet has not yet been undertaken. To provide further context for the results of the assessments, principals of participating schools were asked to complete a 30-minute questionnaire about their school. There were no teacher questionnaires in PISA.

Many steps were taken to ensure the high quality of the data, including careful translation of assessment instruments and the implementation of arrangements and training to maintain a uniform approach in the conduct of the tests, the marking and other key steps in the process. For example, ACER trained and appointed sufficient independent test administrators to implement the testing in the 231 Australian schools participating in the project.

## Results

As noted earlier, scientific literacy was one of the two minor domains in PISA 2000. The assessment of scientific literacy involved a total of 35 test items, using a mixture of multiple choice, open constructed responses and complex multiple choice questions. Results for this domain are presented in the international and national reports in terms of scores on a single scale which was determined so that the mean score across all the participating OECD countries was 500 with a standard deviation of 100 (that is, with about two-thirds of students scoring between 400 and 600 points). These can be sourced in the following reports: OECD, *Knowledge and Skills for Life. First Results from PISA 2000* and OECD 2001 and Lokan, Greenwood and Cresswell, *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australian Students? The PISA 2000 Survey of Students' Reading, Mathematical and Scientific Literacy Skills*.

While described proficiency levels were not developed for scientific literacy (because of the relatively small number of items involved), it was possible, as indicated in ACER's national report, to distinguish the characteristics of tasks at low, medium and high levels of difficulty on the scale. Compared with easier tasks, the more difficult tasks tend to feature more complex concepts and more data while also requiring more connections to be made between different components of the task, more reasoning steps and more precise communication of explanations or conclusions.

### Internationally

Internationally, Australia performed very well in all three domains of PISA 2000, scoring well above the OECD average in each case. In scientific literacy, Australian students on average were outperformed by students from only two other countries, Korea and Japan. As can be seen from Table 9.1, Australia was placed in the next group of countries, seven in all, with mean scores not significantly different from one another. Thus Australia scored on a par with the English-speaking countries, the UK, Canada and New Zealand, and three other countries, Finland, Austria and Ireland. It is notable that Australia performed significantly better than the US, Germany and most other European countries.

In terms of specific items, Australia gained the highest result of any country on an item calling for identification of evidence needed in an investigation. Including this item, our students were within five percentage points of the highest achieving country on ten items – five in physics/chemistry, three in biology and two in Earth/space.

**Table 9.1 PISA 2000 – Student achievement in scientific literacy by country**

Country	Mean score	Standard error <sup>(a)</sup>
<b>Countries achieving significantly higher than Australia</b>		
Korea	552	2.7
Japan	550	5.5
<b>Countries with no significant difference from Australia</b>		
Finland	538	2.5
United Kingdom	532	2.7
Canada	529	1.6
New Zealand	528	2.4
<b>Australia</b>	<b>528</b>	<b>3.5</b>
Austria	519	2.6
Ireland	513	3.2
<b>Countries achieving significantly lower than Australia</b>		
Sweden	512	2.5
Czech Republic	511	2.4
<b>OECD average</b>	<b>500</b>	<b>0.7</b>
France	500	3.2
Norway	500	2.8
United States	499	7.3
Hungary	496	4.2
Iceland	496	2.2
Belgium	496	4.3
Switzerland	496	4.4
Spain	491	3.0
Germany	487	2.4
Poland	483	5.1
Denmark	481	2.8
Italy	478	3.1
Liechtenstein*	476	7.1
Greece	461	4.9
Russian Federation*	460	4.7
Latvia*	460	5.6
Portugal	459	4.0
Luxembourg	443	2.3
Mexico	422	3.2
Brazil*	375	3.3

\* Denotes non-OECD country.

(a) Standard Error (SE) is an indication of how much the mean of a variable might fluctuate by chance with repeated measurements. The smaller the SE the more accurate the measurement. In the case of these PISA results we can expect that the mean would fall within the range of the mean  $\pm$  the SE 95 times out of each 100 different samples taken.

Source: Derived from Lokan, Greenwood and Cresswell, *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australia's Students?*, ACER 2001

## By State and Territory

Oversampling of smaller States and Territories in PISA 2000 has enabled results to be produced by State and Territory (see Table 9.2). The data show that there were not great differences in performance among the States and Territories. However, there were some differences that are statistically significant: for example, ACT students performed better than students from Queensland, Victoria, Tasmania and the Northern Territory. The table also shows that on average students from all States and Territories scored at or above the OECD average.

## By student sub-group

There was no significant difference in mean achievement in scientific literacy by gender in Australia or in any of the States or Territories. Internationally, boys out-performed girls in only three countries in scientific literacy, Austria, Denmark and Korea, while the opposite occurred in Latvia, New Zealand and the Russian Federation.

In Australia, the differences between males and females were minor, with females stronger than males by three or four percentage points in biology and scientific investigation, while males were stronger than females by three or four percentage points in physics/chemistry and in demonstrating understanding of concepts. The national report concludes, with some caution, that males may have a more developed level of conceptual understanding while females may have a more developed level of understanding of scientific procedures.

In contrast to the minor differences by gender, PISA 2000 shows considerable variation in scientific literacy achievement according to socioeconomic status (SES) as measured by parents' occupations. This is illustrated in Figure 7.6 in ACER's national report *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australia's Students?*. Australia's social gradient, as the line of best fit between SES and achievement is called, is above the international average gradient and curves slightly in the opposite direction to the international gradient at both ends of the scale.

**Table 9.2 PISA 2000 – Student achievement in scientific literacy by State and Territory**

			ACT	WA	SA	NSW	Qld	Vic.	Tas.	NT
	Mean	SE <sup>(a)</sup>	553.0	543.9	538.9	531.8	523.2	515.5	509.9	489.6
	Mean	SE <sup>(a)</sup>	5.9	7.7	9.2	6.9	6.7	8.1	9.3	7.6
ACT	553.0	5.9		0	0	0	1	1	1	1
WA	543.9	7.7	0		0	0	0	0	1	1
SA	538.9	9.2	0	0		0	0	0	0	1
NSW	531.8	6.9	0	0	0		0	0	0	1
Qld	523.2	6.7	-1	0	0	0		0	0	1
Vic.	515.5	8.1	-1	0	0	0	0		0	0
Tas.	509.9	9.3	-1	-1	0	0	0	0		0
NT	489.6	7.6	-1	-1	-1	-1	-1	0	0	

1 = Average performance statistically significantly higher than in comparison State.

0 = No statistically significant difference from comparison State.

-1 = Average performance statistically significantly lower than in comparison State.

Note: Read across the row to compare a State's performance with that of the States listed in the column headings. For example, a reader wishing to compare Victoria to all other States would find Victoria in the first column and looking across the row see that while Victoria had performed at a significantly lower level than the ACT there was no significant difference in performance with any of the other States.

(a) Standard Error (SE) is an indication of how much the mean of a variable might fluctuate by chance with repeated measurements. The smaller the SE the more accurate the measurement. In the case of these PISA results we can expect that the mean would fall within the range of the mean  $\pm$  the SE 95 times out of each 100 different samples taken.

Source: Lohan, Greenwood and Cresswell, *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australia's Students?*, ACER 2001

There are two points of interest arising from the figure. Firstly, it indicates that there is a greater difference in the achievement of Australian students, relative to the international average, at the lower rather than the higher end of the spectrum. Secondly, it is noteworthy that Australian students at the lower end of the SES index are, on average, scoring around the international mean for science.

The figure also shows the actual results of 2,000 randomly selected students from the Australian sample, with each dot representing one student. It is noteworthy that the range of results is vast, with a large number of low SES students achieving high scores and many students with a high SES achieving low scores. The implication of this is that there is no simple deterministic relationship between SES and achievement. (The gathering of the student dots in bands results from the way SES was calculated.)

Generally, Indigenous students did not do as well in scientific literacy as non-Indigenous students, as Table 9.3 indicates. The difference in mean scores is both statistically and educationally significant. Further analysis of Indigenous students' achievements in PISA 2000 as a whole is expected to be published in a separate ACER report in the first half of 2002.

Students from language backgrounds other than English also did not perform as well, on average, as students from English-speaking backgrounds in this domain, as shown above. The lower score for those whose home language is not English may in part be due to

**Table 9.3 PISA 2000 – Australian student achievement in scientific literacy by selected background characteristics**

Student group	Mean	Standard deviation
Indigenous students	447.8	97.9
Non-Indigenous students	529.3	94.4
Home language not English	496.5	96.7
Home language English	534.3	93.0
Mainland State capital cities	531.0	96.0
Major urban statistical districts	530.2	97.4
Provincial cities	526.0	93.9
Other regional areas	516.2	90.5
Remote	481.2	107.1
All students	528	94.0

Source: Lokan, Greenwood and Cresswell, *15-Up and Counting, Reading, Writing, Reasoning ... How Literate are Australia's Students?*, ACER 2001, and unpublished data from ACER.

the science items being presented in contexts which required students to read passages of text and hence the assessment of scientific literacy was also a measure of reading skills.

Information on students' home location was not collected in PISA 2000 but data on school location was analysed to see if there were differences in achievement by geographic location (see Table 9.3). The data show that students at schools classified as remote performed significantly below students from schools in all other locations, including students from provincial cities and other regional areas who performed on a par with their capital city and other major urban counterparts. Differences in SES by region are likely to be part of the reason for the differences in achievement by location.

### Other findings

Multilevel and multivariate analyses carried out by ACER indicate that by far the most important factor associated with Australian students' achievement in scientific literacy in PISA 2000 was the SES of the individual student, accounting for 25 per cent of between-school variance and nearly 7 per cent of within-school variance.

Other important factors are shown to be family wealth, cultural possessions, time spent on homework and the mean SES of the school attended. Another school factor appearing to impact on achievement in scientific literacy was the amount of time devoted to instruction in the domain. This was not a significant factor in the other domains. There were more student background and school characteristics associated with achievement in scientific literacy compared with mathematical literacy, and more school level variables associated with it than with either reading or mathematical literacy.

## TIMSS

The taskforce was aware that Australia had also participated in TIMSS. In Australia, data was collected from middle primary and junior secondary students at the end of the 1994 school year and in 1995 for students in their final year of schooling. The study involved the testing of over half a million students in 45 countries in more than 30 languages.

The content areas in the TIMSS science curriculum framework for middle primary students were:

- life science
- physical science
- earth science (including the place of the earth in the universe)
- environmental issues and the nature of science.



The TIMSS curriculum framework for the assessment of junior secondary students contained five content areas:

- earth science (including the place of Earth in the universe)
- life science
- physics
- chemistry
- environmental issues and the nature of science.

A TIMSS repeat study (TIMSS-R) was completed in Australia in 1998 when the junior secondary cohort, the middle primary cohort in 1994, was retested. The results of the original testing were published in the 1996 edition of the *National Report on Schooling in Australia*. A summary of the 1998 test results, which were released in late 2000, can be found below. The next stage of TIMSS will be the Trends in International Mathematics and Science Study, which has been approved by the International Association for the Evaluation of Educational Achievement (IEA). If Australia decides to participate, it will involve assessment of students in years 4 and 8 and testing is scheduled for late 2002.

In December 2000, the results of the TIMSS-R study were announced. TIMSS, the largest and most thorough comparative study of student achievement ever undertaken, aims to identify curriculum, instructional and other variables related to differences in student achievement in school-level mathematics and science. TIMSS provides valuable information for policy makers, curriculum specialists and researchers. It also enables Australia to benchmark the performance of its students against those of other countries and – where the data is available – to make comparisons among States and Territories.

Since the mid-1990s, TIMSS has been investigating mathematics and science achievement among three groups of students in over 40 countries: middle primary students (Population 1), junior secondary students (Population 2) and students in their final year of secondary schooling (Population 3). Results for each of these groups have been outlined in previous editions of the *National Report on Schooling in Australia*: Population 1 in the 1997 edition, Population 2 in 1996 and final-year students in 1998. Further details can be found at <http://timss.bc.edu/timss1995.html>.

TIMSS is the most recent in a series of international comparative studies undertaken by the IEA since the early 1960s on subject areas such as mathematics, science, social studies, literacy, second language learning, computers and civics. The IEA is an independent international cooperative of research centres from

over 50 educational systems. Australia has taken part in all but one of the mathematics and science studies, and in that case a replication was undertaken in Australian schools. Australia's participation in TIMSS is funded jointly by the Commonwealth and States and is managed by ACER.

In 1998–99 TIMSS was replicated for the junior secondary group – in Australia, students in years 8 and 9 – in the TIMSS-R study. TIMSS-R therefore provided information on trends in the science and mathematics performance of 13–14-year-olds since the mid-1990s and information on the progress of the cohort tested as middle primary students four years before. In Australia, the TIMSS-R sample comprised just over 4,000 students in 170 schools, from year 8 in NSW, Victoria, Tasmania and the ACT, and year 9 in Queensland, SA, WA and the NT. The average age of Australian students was 14.3 years, compared with an international average of 14.4 years. It should be noted that the data from TIMSS-R did not permit interstate comparisons of performance. Further details can be found on the TIMSS website at <http://timss.bc.edu/timss1999.html>.

## Results

In the science component of TIMSS, students completed a 90-minute test comprising multiple-choice, short-answer and extended-response questions in the content areas of Earth Science, Life Science, Physics, Chemistry, Environmental and Resource Issues, and Scientific Inquiry and the Nature of Science. They also completed a questionnaire on their background and their experience in learning science, while their teachers and principals answered questionnaires dealing with issues such as curriculum, school context and teacher experience.

TIMSS-R showed that our junior secondary students are performing well above the international average in science, with only Chinese Taipei (a new participant in TIMSS) doing better. Australia performed at the level of 15 other countries, including Singapore, Japan, Korea, Hong Kong, England and Canada, while countries performing below Australia included the United States, New Zealand and Malaysia. Some 19 per cent of Australian students performed in the top 10 per cent internationally.

The achievement of our students as a whole was significantly above the international average in all six content areas, Australia's best performance being in Environmental and Resources Issues. There were no significant gender differences in the average achievement of Australian students in science, though significantly more males were in the upper quarter (30 per cent compared with 20 per cent of females), and in one content area, Chemistry, boys did significantly better.

As for trends since the TIMSS study of 1994–95, ACER reports that Australia has improved its relative position among countries taking part in both studies. In the mid-90s study Australia's average was not significantly different from the average across countries at year 8 level; in 1998–99 Australian students' average was higher than the average across countries participating in both studies.

**Table 9.4 TIMSS-R science, average scale score**

Country	Mean score
<b>Average achievement significantly higher than Australia's</b>	
Chinese Taipei	569
<b>Average achievement the same as Australia's</b>	
Singapore	568
Hungary	552
Japan	550
Korea	549
Netherlands	545
<b>Australia</b>	<b>540</b>
Czech Republic	539
England	538
Finland	535
Slovak Republic	535
Belgium (Flemish)	535
Slovenia	533
Canada	533
Hong Kong SAR	530
Russian Federation	529
Bulgaria	518
<b>Average achievement significantly lower than Australia's</b>	
United States	515
New Zealand	510
Latvia	503
Italy	493
Malaysia	492
Lithuania	488
<b>International average</b>	<b>488</b>
Thailand	482
Romania	472
Israel	468
Cyprus	460
Moldova	459
Macedonia	458
Jordan	450
Iran	448
Indonesia	435
Turkey	433
Tunisia	430
Chile	420
Philippines	345
Morocco	323
South Africa	243

Source: *TIMSS 1999 International Science Report – Findings from IEA's Repeat of the Third International Mathematics and Science Study at the Eighth Grade*, Michael O Martin et al., ISC/IEA, December 2000, Exhibit 1.1 p. 32, and *TIMSS-R Summary of International Results – Science*, ACER, 6 December 2000

## Measuring student achievement: performance measures

### Primary students

Late in 1999, the NEPMT commissioned a consultancy team to provide advice on the development of key performance indicators to monitor the knowledge, skills and understanding of primary students in the key learning area of science. As part of this task, the consultants were asked to address the feasibility of using the framework of the PISA project for assessments at the primary level.

The consultancy team of Professors Sam Ball, Ian Rae and Jim Tognolini undertook an extensive program of structured interviews and prepared a number of draft reports for the taskforce's consideration. They perused States' and Territories' curriculum and assessment documents and interviewed more than 30 experts across all jurisdictions. Their report supported the concept of assessing science literacy, endorsed the PISA definition of science literacy, and their proposed reporting framework for the assessment of primary science was based on the PISA framework. Their detailed conclusions were divided into three groups:

- Conclusions concerning curriculum
  - Knowledge of science 'facts' is not an important educational goal.
  - Understanding of scientific concepts is essential.
  - Skill in the use and understanding of scientific processes embedded in a context of scientific concepts is essential.
  - There is an underlying commonality across Australian States and Territories in terms of primary science concepts.
  - Differences in curricula exist but they can be accommodated in a monitoring process developed for the purposes of nationally comparable reporting.
- Conclusions concerning assessment
  - Teachers should be involved in administering the tests, especially the practical assessments. This will mean one and a half days of release time for training and for test administration.

- The tests should include objective, open-ended and practical tasks.
- The assessments should take place when students are towards the end of year 6.
- Assessment for monitoring purposes should be undertaken every two years at first, but a later move towards every three or so years should be contemplated.
- There is no need for census testing for the purposes of national monitoring. A scientific sample of up to 600 schools would be sufficient. Oversampling might be needed to ensure low sampling error in small-population States and Territories or in categories of disadvantage where numbers are small.
- Non-sampled schools should have the opportunity to administer the assessments later should they so wish.
- A three-dimensional specification model is recommended as a framework for assessment and later reporting. The three dimensions are:
  - 1 assessment using a mixture of objective, open-ended and practical tasks
  - 2 assessment of both basic concepts and scientific processes
  - 3 assessment across the content areas of Life, Earth and Beyond, Natural and Processed Materials and Energy and Change.
- Conclusions concerning reporting
  - Reporting should be both normative and criterion referenced.
  - Normative referencing should allow States and Territories to compare their student performance with a profile of data generated from all sampled Australian students.
  - Criterion referencing should provide States and Territories with information on percentages of students reaching specified bands of performance:
    - 1 Band 1 (not yet competent with respect to some element in the profile)
    - 2 Band 2 (within a reasonable range or about to achieve the element)
    - 3 Band 3 (achieved the desired element)
    - 4 Band 4 (moved beyond the desired element).

- Reporting will occur through the National Report on Schooling in Australia. However, sampled schools should receive their results in confidence. Similarly, parents should receive, in confidence, through the sampled schools, information on their child's performance.
- Electronic reporting to each sampled school with some accompanying diagnostic analysis should be considered.

Five basic options for monitoring were presented and each was analysed in terms of costs and benefits. The five were:

- 1 no national assessment and reporting
- 2 census testing of all year 6 students
- 3 each State and Territory develops its own assessment
- 4 an item bank be developed and monitoring occur through schools or States and Territories choosing from the item bank
- 5 an assessment involving objective recognition-type items and open-ended items would be developed and administered to all targeted students in a scientific sample in each State and Territory, supplemented by other practical assessments for all those students. The practical assessments would be mediated and marked by the classroom teacher.

The consultants proposed the adoption of option 5 and the taskforce is investigating this further before taking recommendations to ministers.

## Secondary students

In 2000, ministers agreed to the taskforce recommendation that for the time being, information obtained through participation in PISA will provide appropriate, nationally comparable measures of science achievement. In making this recommendation, the taskforce was conscious that Australia was already participating in this program and that the assessment model it was using was compatible with that envisaged for Australia. Data is being collected on the triennial basis and concerns the achievement of students at the end of the compulsory years of schooling. The first set of data from the year 2000 is that reported above. In 2003, as in 2000, science will be a minor domain of PISA but it will be the major domain in 2006.

## Student participation

As noted above the development of performance criteria in this area has not been taken very far to date. Some initial consideration was, however, given to participation measures at the upper secondary level as this has been the focus for media and other attention for some time. In science, as it is taught in schools, there are a large number of component disciplines, such as physics, chemistry, biology, earth science and geology. The arrangement and definition of these various disciplines vary from State to State. For example, while in most States senior secondary science curricula consist of the major groupings of physics, chemistry, biology, earth science, geology and psychology, some States and Territories use less common groupings, such as physical science, general science and environmental science.

A number of recent reports have expressed concern about the apparent decline in the number of students enrolling in traditional science courses at the secondary and tertiary levels. For example, a 1999 report from the Australian Council of Deans of Education, *Trends in Science Education*, found that between 1989 and 1997 (a period in which the total number of students increased by 3 per cent), Australia-wide enrolments in year 12 chemistry, physics, geology and biology dropped by 12 per cent, 8 per cent, 62 per cent and 17 per cent respectively.

The taskforce identified a number of issues concerning the limitations of existing participation data and the need to improve their usefulness. However, by the end of 2000, it had not made any decision on whether to proceed with the development of measures of participation as an indicator of student outcomes in science. This report continues the practice of reporting participation as shown in year 12 pre-tertiary enrolment figures.

The NEPMT has not yet decided whether to include participation as a performance indicator for monitoring science. The number of enrolments in year 12 tertiary-accredited subjects was included for all learning areas in previous editions of the *National Report on Schooling in Australia* and is included this year in Table 10 (Appendix 1: Statistical annex).

Table 9.5 shows the enrolments in the science learning area as a percentage of all enrolments in tertiary-accredited subjects throughout the last decade. This table and Figure 9.1 show that there was a sharp decline in the percentage of science enrolments during the early years of the decade, when total

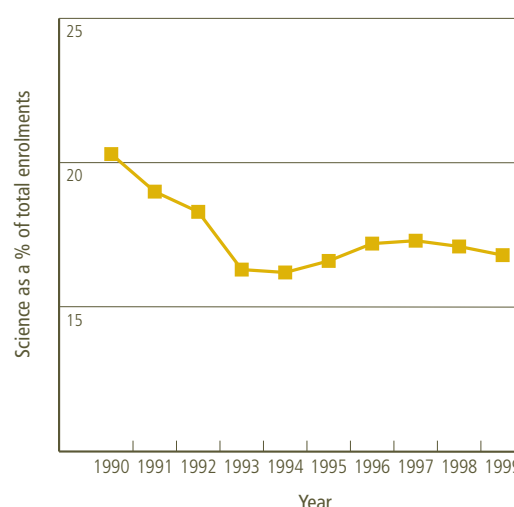
enrolments were expanding rapidly. While the proportion of science enrolments appears to have levelled out in the latter half of the decade, the number of science enrolments in 1999 remained 10,000 fewer than in 1990, even though total subject enrolments had risen by 100,000 in the same period.

**Table 9.5 Year 12 tertiary-accredited enrolments, Australia, 1990–99**

Year	Total subject enrolments	Science enrolments	Science as a percentage of total enrolments
1990	760,715	154,305	20.3
1991	866,387	164,926	19.0
1992	952,047	174,681	18.3
1993	909,835	148,355	16.3
1994	885,850	143,619	16.2
1995	825,667	136,741	16.6
1996	851,306	146,658	17.2
1997	868,037	150,223	17.3
1998	838,945	143,326	17.1
1999	859,041	144,342	16.8

Source: Based on *National Report on Schooling in Australia* for the years 1990–99

**Figure 9.1 Enrolments in tertiary-accredited science as a percentage of total year 12 enrolments, Australia, 1990–99**



Source: Based on *National Report on Schooling in Australia* for the years 1990–99

# Case studies in science education

Case studies have been included:

- to demonstrate practice at school and system levels
- to allow schools to compare their own practice and to make judgements about improvement
- to provide public recognition of outstanding school programs and achievements.

They are intended to show examples of practice in:

- school organisation, pedagogy and curriculum
- school performance, measurement and review
- professional development, teacher education and system improvement
- organisation, pedagogy and assessment in particular key learning areas
- the development of school–community and school–business links
- provision for particular equity groups
- management at school and system levels.

## CSIRO Science Education Centre Travelling Program, Northern Territory

### Context

This project is a joint initiative initiated in 2000 between the Northern Territory Department of Education, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Science Education Centre and Commonwealth Targeted Programs.

In fulfilling the objectives of delivering this high-quality educational program throughout the NT there are a number of challenges to be overcome.

- Fifty-three per cent of schools and nearly 27 per cent of students are located in remote areas. A high proportion of these students are significantly disadvantaged both socioeconomically and educationally.
- Over 33 per cent of young people between five and 17 years have a language other than English as their first language.

- About 35 per cent of the total student population is Indigenous, and many of these are ESL learners.
- The population, including both students and teachers, is highly mobile.

The project evolved because teachers were saying 'I'm too busy concentrating on reading, writing and mathematics to have time for science'. The project is raising the profile of science by demonstrating that it is a great vehicle for developing literacy and numeracy skills while at the same time developing scientific knowledge and skills. Its aims are: to take science to all schools across the Northern Territory – but in particular rural and remote schools, and to improve outcomes for English as a Second Language (ESL), isolated and Indigenous students. It does this by:

- demonstrating practice teaching strategies
- providing in-class human and material resources
- presenting professional development sessions to enhance teachers' literacy and numeracy teaching and assessment through science
- teaching scientific activities that are interesting to students and can be used as a stimulus for many literacy and numeracy outcomes.

### The project

During 2000, approximately 50 schools were visited, allowing 5,050 students and their teachers to participate in hands-on activities.

The project team consists of:

- a project manager, an Executive Teacher Level 2, funded by the NT Department of Education
- two CSIRO Science Education Centre presenters, who have experience in delivery of programs to remote localities.

The project team contacts schools by phone or fax to work out an initial itinerary. Visits are organised on a cluster basis (schools within the same geographic area) and often linked in with cluster events, for example Friendly Games, Remote Area Literacy Festival, Small Schools Conference. Presenters travel either alone or in pairs, predominantly by four-wheel-drive vehicle or, when vehicle access is impossible, by chartered aircraft.

Sessions are generally aimed at covering the whole school as opposed to a specific age group due to the difficulties in gaining access in many cases. Sessions usually involve direct hands-on

activities with students and a professional development workshop with teachers.

During activities students:

- are encouraged to predict the outcome prior to the experiment or activity
- are expected to make observations using sight, hearing, smell and touch
- are encouraged to work as part of a team, for example pairs for whisper chats, threes for experiments
- follow a sequence of either verbal or written instructions
- perform mathematical calculations as part of data manipulation (for older students).

During professional development sessions, teachers examine:

- methods of incorporating science into the program as a tool for teaching literacy and numeracy
- the use of texts as a topic stimulus using an ESL program called Walking Talking Texts
- materials produced as part of the Implementing the Common Curriculum in Aboriginal Schools (ICCAS) project – a series of NT-produced culturally appropriate books covering science for years 4–7
- curriculum and related documents
- appropriate texts and resources.

## School sessions

An experiment is demonstrated to the whole group by the visiting presenter. The presenter and the classroom teacher record the results on a large piece of butcher's paper using appropriate modifications of formal headings used in such scientific reports, for example:

FORMAL	MODIFIED (for better student understanding)
Aims	What do we want to find out?
Hypothesis	What do we think will happen?
Materials	What are we going to use?
Method	How are we going to do this experiment?
Results	What are we going to look at? (measure, weigh, count)
Conclusion	What did we find out?

During the session presenters use formal scientific language in combination with the modified language. Teachers are encouraged to use this process of modelling and then move to more formal language as students become more confident.

Students are then divided into groups and undertake their own experiments. Worksheets are provided for each group following the report outline and students are expected to record their results and then report back to other groups orally.

Teachers are always provided with a simple set of follow-up experiments. Tasks are designed to be enjoyable for, and achievable by, all students. This has enabled some 5,000 rural/remote students and their teachers to engage in interesting everyday science covering topics such as: Cool Chemistry; Electricity and Magnets; Air and Atmosphere; Working Scientifically; Gene Technology; Drops, Density and Diffusion; Chemistry of Food; and It's a Chemical World.

## Program evaluation

The program is evaluated through:

- written responses to questionnaires
- interviews with teachers
- observation of student behaviour and responses during sessions
- observation of accompanying teachers during sessions
- feedback from principals, students and staff.

Outcomes achieved include the following:

- Primary students have been successful in using worksheets and following instructions using science-based language.
- Primary and secondary students have engaged with informational and procedural texts.
- Students have successfully predicted outcomes of experiments.
- Students have collected, analysed and organised information.
- Students have worked together in teams.
- Students, teachers and assistants have been motivated to engage with science in an ongoing way.
- Teacher confidence in teaching science has improved.

# Learning meaningful science through a relevant context at Denmark High School, Western Australia

## Introduction

Science in schools needs to be engaging and meaningful for all students. While science is essential for developing scientific skills and conceptual ideas that will prepare and motivate capable students to become scientists, there is also a need for all students to become scientifically literate members of society. For this, they need to be offered programs that connect their school science to their everyday lives, providing them with opportunities to use the science they learn to address issues and concerns that are relevant to them.

This case study illustrates how the science curriculum in a country secondary school was developed to cater for the specific needs of the students attending that school. It also demonstrates the benefits of working in partnership with the local community and other government agencies.

## Context

Denmark is a small town on the south coast of the State, located some 400 kilometres from Perth and with a permanent population of about 5,000. The area has strong links to the fishing industry and recreational fishing is a popular activity. Local farmers are facing issues of land salinity and are exploring solutions and alternatives. Tourism is a growing industry, with the forests and beaches making the town a popular tourist destination.

Secondary students in Denmark and the surrounding areas are serviced by a high school that caters for students in years 8–10. Although there is provision for some students to continue their studies into years 11 and 12, most students continuing their education beyond year 10 travel to the larger regional centre of Albany, which has two government senior high schools.

All government schools are in the process of introducing an outcomes focus to the curriculum and are using the Curriculum Council's Curriculum Framework and the Education Department's Outcomes and Standards Framework as part of a systemic Curriculum Improvement Program.

Denmark has a campus of the WA College of Agriculture which draws students from across the State.

## Aquaculture

Jim Lillywhite is a science teacher who has lived in the area for a number of years and has an understanding of local needs and issues. He has used this knowledge and his links with the community to develop a program in which students can achieve science outcomes from an active, hands-on involvement with aquaculture.

He argues that aquaculture provides an opportunity to engage students in science that is meaningful to them as individuals and members of the local community, while also providing links to employment opportunities. It enables them to become enterprising as they engage in research and discussion about an initiative that has potential economic benefits for both the region and the State.

The change to an outcomes focus provided the opportunity for Jim to explore ways of using the freedom this offered to help students to achieve a range of outcomes in the context of aquaculture. The specific content that students learnt as they developed their understandings was related to this context, making it relevant and meaningful.

## The program

Units in aquaculture were offered to students in year 10 and enabled them to achieve the outcomes of the Investigating Scientifically, Natural and Processed Materials, Energy and Change, and Life and Living strands of the Science Outcome Statements. The integrated nature of the program modelled real-life experiences in science, while still maintaining a focus on students' learning and their achievement of the science outcomes.

Information on animal behaviour, systems and the environment supported students' achievement of the Life and Living outcome. As students developed their ideas about fish growth and behaviour, they established controlled investigations to explore these ideas and, in doing so, developed their understandings of a process of scientific investigation to achieve the Investigating Scientifically outcome. The environment of the fish provided the context for students to understand chemical properties, their uses and related safety issues. This supported their achievement of the



Natural and Processed Materials outcome. The energy necessary to maintain the fish tanks, the buoyancy of materials in water and the density variations with different water salinities provided contexts for students to understand energy formation, transfer and transformation, contributing to their achievement of the Energy and Change outcome.

Opportunities for students to achieve outcomes of Science in Daily Life, Science in Society, Acting Responsibly and Communicating Scientifically are embedded in the program, as were opportunities for the achievement of many of the overarching Outcomes of the Curriculum Framework.

## Recognition of achievements

The aquaculture units enabled the students to demonstrate their level of achievement of the outcomes in the Outcomes and Standards Framework. The program also connected to the Department of Training and Employment Units of Competency. Students covered the content essential for the achievement of two core units from Certificate II in Aquaculture: Water Quality Analysis (Introductory) and Aquaculture Techniques (Basic). Knowing that the program contributed towards a TAFE qualification provided additional motivation for students. The school is currently exploring connections between the course and some functional areas that could lead to the award of a Certificate in Health from the Health Department through the local government authority.

## Partnerships

The school developed a number of partnerships with business and industry:

- In collaboration with the local campus of the WA College of Agriculture, it worked to obtain grants for the essential materials and equipment. This enabled the tanks and filters to be housed in a purpose-built shed on the college's grounds. A bus was used to take the high school students to this site.
- Fisheries WA in Albany took a keen interest in the program, providing support in the form of information and encouragement.
- The Denmark TAFE centre negotiated arrangements for the students to achieve accreditation for Units of Competency.
- Local industries such as fishing provided opportunities for the students to engage in work experience.

## Benefits to the community

Fisheries WA is actively supporting research into the development of a cooperative aquaculture industry with farmers who are facing the effects of salinity – land is becoming unsuitable for traditional crops and farm dams are too salty for livestock. They are facing a generational change in the use of their land. Research into the use of salty dams for trout farming has indicated the potential for this to become a significant industry in the State. However, further research is required. Farmers' attitudes to the adoption of less traditional farming practices need to be addressed, and their knowledge and skills in aquaculture practices need to be enhanced. With students learning through an aquaculture context, opportunities are being provided to address these issues.

## Benefits to students

Jim has identified a broad range of advantages that this program offered students:

- Motivation: they have an interest in fish and fishing, so learning science through working with these animals was relevant, meaningful and interesting
- Local relevance: as the farming community moves from agriculture to aquaculture, this program helped to increase the knowledge base that will support the development of the local industry
- Authentic science: students were actively engaging in investigations that contributed to local scientific knowledge
- Economic importance: students were able to make a contribution to the future growth of the area
- Challenging science: students strove to achieve higher level outcomes
- Connections between learning areas: students achieved outcomes across several areas.

The school administration recognises the change in students' attitudes towards science and schooling that occurred as a result of their involvement in this program. One girl who saw little value in schooling in year 9 has changed her attitude in year 10. Her motivation was illustrated by her keenness to maintain the monitoring of the fish after school hours and during school vacations. There was also an increase in the number of students pursuing courses beyond year 10 with the intention of a career in aquaculture.

## Future potential

The success of the program in year 10 is leading the school to explore:

- opportunities for students to continue their studies of aquaculture in post-compulsory schooling through TAFE at Denmark – other members of the community are also being encouraged to participate
- further links across the curriculum, particularly in Technology and Enterprise
- the formation of a cooperative model for other schools. Modern communications technology enables schools to work collaboratively on scientific research. Groups of students in one school can investigate aspects of fish growth and development and share their experimental design and results with students in other schools. In this way, they become part of a more significant scientific research project and engage in higher order analytical thinking.

# Chapter 10

# Information and communication technology

## Development of key performance measures

In 1999, when meeting as the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA), Australia's education ministers endorsed a new statement of the national goals for Australian schooling. At the same time, they affirmed their commitment to national reporting of comparable education outcomes and agreed that the new statement of goals would provide an appropriate framework for reporting. To further this process, ministers decided on some priority areas that would be the focus for reporting in the first stage. Information and Communication Technology (ICT) was one of the areas chosen as a priority because it was considered crucial to Australia's educational, economic and social well-being.

The *Adelaide Declaration on National Goals for Schooling in the Twenty-first Century* specifies that 'when students leave school, they should ... be confident, creative and productive users of new technologies, particularly information and communication technologies, and understand the impact of those technologies on society.' When ministers approved the new national goals they also directed that work proceed on developing key performance measures to monitor and report on progress towards the achievement of the goals on a national basis, including in ICT education. This work was charged to a new official body, the National Education Performance Monitoring Taskforce (NEPMT).

By the end of 1999, the taskforce had established a sub-group whose function was to undertake the development of appropriate performance indicators. In addition to taskforce members, the sub-group included representatives of the Education Network Australia (EdNA) Schools Advisory Group which supports the EdNA Reference Committee (ERC). This Committee fosters collaboration and communication among and between the education sectors through communication links and information sharing, and plays an important role in overseeing the progress of ICT in education and training in Australia.

## Appointment of a consultant

Early in 2000, the NEPMT called for tenders for a consultancy to prepare a report that proposed an approach to, and options

for, the measurement of the changing profile of the information technology (IT) skills and aptitudes of Australian school students, within the context of the National Goals for Schooling in the Twenty-first Century. The taskforce indicated that the report should be based on a review and an analysis of national and international practices and that any proposed measures should be appropriate for reporting of nationally comparable outcomes of schooling. As well, the report was to take account of the costs and benefits to school authorities and systems of the collection of information against any proposed measures.

The precise purpose of the report was to:

- identify and describe the performance measurement approaches, definitions and sources of data currently used by school systems and authorities, the vocational education and training (VET) system in Australia, researchers and national and international agencies for reporting on IT skills or aptitudes
- evaluate each of the measures in terms of its appropriateness in describing IT achievement for the purposes of national reporting within the context of the National Goals for Schooling in the Twenty-first Century
- develop options for measuring the changing profile of the IT skills and aptitudes of the school population, including the most appropriate types of performance to be assessed; the sorts of comparisons to be made; the target populations about which information is wanted; and the sampling approach to be employed
- identify the extent to which the proposed measures will require further work to develop appropriate definitions
- provide a preliminary assessment of the relative costs and benefits to school systems and authorities of introducing each of the proposed measures (and associated data collection and reporting processes).

The successful tender was submitted by Professor Peter Cuttance and Shirley Stokes, who then worked with the sub-group during the first half of 2000. Their report, *Monitoring Progress Towards the National Goals for Schooling: Information and Communication Technology (ICT) Skills and Knowledge*, was presented to the NEPMT in August 2000.

## Student access to ICT in schools

According to the report, each State and Territory government in Australia has made a commitment to increased access to computers, Internet access for all schools, professional development for teachers and increased networking opportunities for schools. From information provided by school systems around the country, the consultants concluded that in Australia in the year 2000:

- 71 per cent of schools had a student–computer ratio of 15:1 or less and this ratio is decreasing each year
- 37 per cent of the computers in schools were in laboratories and 31 per cent in classrooms
- laptop computers comprised 16 per cent of all computers used for educational purposes in schools – most of these in the non-government school sector
- secondary schools generally had lower student–computer ratios than primary schools
- secondary schools were more likely to place computers in laboratory settings and offer specific ICT courses rather than integrating their use in classrooms across the curriculum
- most computers used for educational purposes in Australian schools ran at 100MHz or faster and students had access to printers, modems, scanners, file servers and digital cameras
- common applications in schools included integrated packages, reference CDs, educational games and virus protection.

## Findings of the report

### Assessment and monitoring

State and Territory Departments of Education provided the consultants with the following information on developments in the assessment and monitoring of ICT skills and knowledge. The consultants sought a sample of information from the non-government sector and from some States and Territories.

#### Victoria

The data on student ICT skills and knowledge are based on teacher assessments of student achievement measured against learning outcomes in the Information strand for Technology in

CSF II. The assessment information is retained at the school and used for reporting to parents. It is not collated centrally and under current arrangements would not be available for national performance monitoring.

Other relevant information included:

- longitudinal survey data on classroom uptake of ICT and the level of software use in schools
- data on the volume of Internet traffic from schools, indicating behavioural change
- data on student access to computers and networks, indicating opportunities to include technology in teaching and learning.

the Department of Education, Employment and Training (DEET) has commissioned evaluations of the Navigator Schools program and the Teacher Notebook initiative and is participating in a joint project with the Australian Research Council on the integration of ICT in the teaching of Science and SOSE across years 5–8.

DEET has published an ICT strategy that proposes the development of measures of student performance against specified learning outcomes related to the use of ICT. Performance measures will be developed through current and proposed research projects. Assessment of student ICT skills will be based on teacher judgements against specific performance criteria with some student self-assessment.

#### Queensland

Education Queensland surveys staff and parents, and students in years 5, 7, 9 and 11 about their satisfaction with student opportunities to use computers, the development of student computer skills and the way computers are used at school. The computer-related questions comprise three items, each with a five-category response option, in a survey of 20–30 items. The survey is conducted annually in all schools, although sampling of students occurs in larger schools. Every school has access to Internet administration software to track, monitor and restrict student access to Internet sites.

In 1997, the department also surveyed the ICT skills of a cross-section of students in years 6 and 7 in government schools. This provided a snapshot of skills across the system and was used to determine the success of the years 6–7 Primary

Computer Program, inform submissions for future funding and identify issues that needed to be addressed in future developments. The evaluation included teacher and student surveys and interviews. Student skills were assessed through self-reports using surveys.

The department is trialing the New Basics project, which includes an integrated framework defining essential areas of learning (New Basics), appropriate and effective approaches to teaching (Productive Pedagogies) and affiliated modes of assessment (Rich Tasks). Elements of the Rich Tasks have a technology component.

## South Australia

The South Australian Department of Education Training and Employment plans an annual assessment from the first year of schooling to year 10 against the South Australian Curriculum Standards and Accountability (SACSA) Framework. ICT outcomes are to be highlighted in the technology learning area and will be made explicit where appropriate within the other learning areas. Processes for assessing and monitoring these competencies were trialed in 2000.

## Western Australia

The Education Department of Western Australia began monitoring knowledge and skills of a sample of students in years 7 and 10 in September 2000. Tasks were based on criteria in the Outcomes and Standards Framework and evaluation was based on 'extended performance tasks'. The achievement profile in 2000 will provide baseline data for future assessments.

A component of the assessment was based on teacher observation of performance against set criteria. In addition to teacher observation, performance tasks were centrally marked, with attention to the issue of reliability. A public report was produced on the outcomes of the monitoring program. Students in year 7 completed one performance task and those in year 10 completed two performance tasks.

## ACT

The Australian Capital Territory has introduced an ICT competency certificate for year 10 students in 2000. By 2001 it aims to have 95 per cent of year 10 students achieving certification. Assessment is based on criteria that are implied and embedded in a number of departmental curriculum documents.

Teachers assess student competence against a matrix of ICT skills that are integrated into the curriculum. Currently students need to demonstrate their competency only once, although future developments may require them to demonstrate their competency in a range of contexts in order to reflect transferability of skills. The competencies were designed to link the skills and knowledge in the certificate to the tertiary sector, employers' needs and the national training frameworks.

A pilot study conducted in 1999 found that:

- students and teachers often had no common formal language to describe competencies, because they had learnt skills and computer applications from informal sources
- students achieved better results in all competencies and at all levels in schools where more teachers were able to report appropriately on student competency.

A computer-based reporting mechanism has been developed to collate results entered by individual teachers. The program includes options allowing teachers to print interim reports for students and teachers to use in monitoring progress towards completion of requirements, parent reports and official certificates of attainment.

## National and international studies

The report found a number of national and international studies that had been completed or were in progress that had the potential to provide valuable information on approaches to assessing and reporting on the ICT skills and knowledge of Australian students. Among those referred to in the report were:

- the national sample study of Australian school students
- Program for International Student Assessment (PISA)
- International Association for the Evaluation of Educational Achievement (IEA) Computers in Education Studies.

## National sample study of Australian school students

The national sample study of the IT skills of Australian school students was published as *Real Time: Computers, Change and Schooling* (Meredyth, D. et al., DETYA, 1999). The study surveyed 6,213 students, 1,258 teachers and 222 principals in 203 schools across Australia in May 1998. The student samples were drawn from years 6–7 and year 10.

The main object of the *Real Time* study was to assess and report on the extent to which Australian primary and secondary students were developing skills of information processing and computing. The study found that, in 1998, students enjoyed using computers at school and were confident in their skills. Nearly all students had more than half of the skills needed for basic operation of computers and over two-thirds had all of them. Over half the students surveyed had a sound range of advanced IT skills, including knowing how to connect to the Web. The basic IT skills of students were equivalent to those of their teachers, and in advanced skills they left their teachers behind, especially in areas such as multimedia creation, using video music and sound clips and creating websites or home pages.

There were disparities in students' IT skills according to school type, size and sector, location and income area and according to students' sex, cultural background and ethnicity. For example, Indigenous students and those from small rural and isolated schools were the most likely to lack basic skills, while students from independent schools and single-sex boys' schools were familiar with the most complex uses of IT.

The study found that students tended to acquire their advanced IT skills at home rather than at school. The higher the average family income of the area in which students went to school and the greater the population density, the more likely they were to have acquired information technology skills at home, to use them more frequently and to have started earlier than others.

Boys had more of the advanced skills than girls, although basic skills were on a par. Boys were also more confident about their ability to use computers. Girls were acquiring basic skills at school but many of the advanced skills were not being taught there, and where girls did not learn advanced computer skills at home they tended not to acquire them at all.

The results of the *Real Time* study were reported at more length in the 1997 *National Report on Schooling in Australia*.

## PISA 2000

PISA 2000 offered countries the option of including an additional component in the student questionnaire seeking information on students' familiarity with IT. Australia, 15 other Organization for Economic Co-operation and Development (OECD) countries and four non-OECD countries included this component in their student questionnaires.

Three aspects of familiarity with IT are reported on below: access to computers, interest in computers, and comfort and perceived ability with computers.

### Access to computers

The majority of the Australian students indicated that they have at least one computer at home (more than 37 per cent had two or more), while fewer than 10 per cent did not have a computer in their home. Almost half the students indicated they use a computer at home on a daily basis. The availability of computers in Australian schools was more restricted, with schools averaging one computer for every five students. Half the Australian students indicated they were able to access a school computer almost daily, a third said they had access a few times each week and 17 per cent said they had access once a week or less.

Only 15 per cent of Australian students said they use a computer every day at school compared with almost half those with home computers using them every day. This pattern of greater use at home was also found among other countries. On average across OECD countries, 36 per cent of students reported using a computer at school almost every day or at least a few times a week while 60 per cent on average used a computer at home every day or at least a few times a week.

While two-thirds of Australian principals said their schools had sufficient computers to meet student needs, the other third felt that lack of computer facilities had probably hindered their students' learning.

### Interest in computers

Of the OECD countries participating in the IT option, students in Germany, Luxembourg, Mexico and the US reported the greatest level of interest in computers, while Denmark and New Zealand students showed the lowest level. Australian students expressed a level of interest below the OECD average.

As expected, males generally showed more interest in computers than females, although in several countries the level of interest was the same for both genders. These countries included the US.

In Australia, both male and female 15-year-old students showed below average interest in computers; they were each below the relevant OECD average level of interest by about the same margin.

## Comfort and perceived ability with computers

The index of comfort and perceived ability with computers was based on students' responses to four questions:

- How comfortable are you with using a computer?
- How comfortable are you with using a computer to write a paper?
- How comfortable are you with taking a test on a computer?
- If you compare yourself with other 15-year-olds, how would you rate your ability to use a computer?

At the international level, the mean for the index was set at 0 and the standard deviation at 1. Values above zero therefore indicated above average levels of comfort and perceived ability.

Internationally, US students reported the highest level of comfort and perceived ability with computers. The next highest were students from Australia, Belgium, Canada and New Zealand. Including the US, these five countries were the only ones to achieve above average scores on the index of comfort and perceived ability with computers.

(It is worth noting that Japan and Korea, countries whose students could also have been expected to report high levels of comfort and ability with computers, did not participate in the IT option.)

In Australia, both males and females reported above average levels of comfort and perceived ability. This was also the case in the US, Canada and New Zealand. While Australian males reported higher levels than Australian females, our gender gap was one of the lowest internationally.

It is interesting to note that our students expressed one of the highest levels of comfort and perceived ability with computers despite having relatively low levels of interest in computers compared with other countries.

Table 10.1 shows that there was little variation in students' self-reported comfort and perceived ability with computers across the Australian States and Territories. Victoria's result was significantly higher than the result in NSW, Western Australia and the Northern Territory.

**Table 10.1 PISA 2000 – Multiple comparison of results on index of comfort and perceived ability with computers, by State and Territory**

			Vic.	ACT	Qld	Tas.	SA	NSW	WA	NT
	Mean	SE <sup>(a)</sup>	0.52	0.48	0.44	0.44	0.43	0.38	0.38	0.26
	Mean	SE <sup>(a)</sup>	0.04	0.06	0.04	0.04	0.04	0.03	0.03	0.06
<b>Vic.</b>	0.52	0.04		0	0	0	0	1	1	1
<b>ACT</b>	0.48	0.06	0		0	0	0	0	0	0
<b>Qld</b>	0.44	0.04	0	0		0	0	0	0	0
<b>Tas.</b>	0.44	0.04	0	0	0		0	0	0	0
<b>SA</b>	0.43	0.04	0	0	0	0		0	0	0
<b>NSW</b>	0.38	0.03	-1	0	0	0	0		0	0
<b>WA</b>	0.38	0.03	-1	0	0	0	0	0		0
<b>NT</b>	0.26	0.06	-1	0	0	0	0	0	0	

1 = Average performance statistically significantly higher than in comparison State.

0 = No statistically significant difference from comparison State.

-1 = Average performance statistically significantly lower than in comparison State..

Note: Read across the row to compare a State's performance with that of the States listed in the column headings. For example, a reader wishing to compare NSW to all other States would find NSW in the first column and looking across the row see that while NSW had performed at a significantly lower level than Victoria there was no significant difference in performance with any of the other States.

(a) Standard Error (SE) is an indication of how much the mean of a variable might fluctuate by chance with repeated measurements. The smaller the SE the more accurate the measurement. In the case of these PISA results we can expect that the mean would fall within the range of the mean +/- the SE 95 times out of each 100 different samples taken.

Source: ACER, unpublished data from PISA 2000



## Computers in Education studies

The International Association for the Evaluation of Educational Achievement (IEA) has conducted two studies of computers in education. The first was a two-part survey known as Computers in Education 1, conducted in 1989, and the second, known as Computers in Education 2, was conducted in 1992.

A second and more recent study, known as the Second Information Technology in Education Study (SITES), is a study in three modules. Conducted in 1997–99, Module 1 (M1) was a survey of principals and technology coordinators that examined the extent to which schools have adopted and implemented pedagogical practices considered important to education in the information society.

Module 2 (M2), being conducted in 1999–2002, builds on Module 1 and is a qualitative study of innovative pedagogical practices that use ICT. In each participating country national panels are using common criteria, modified by national context, to select innovative classrooms. National research teams are using a common set of case study methods to collect data on the pedagogical practices of teachers and learners, the role that ICT plays in these practices, and the contextual factors that support and influence them.

Module 3 (M3) is scheduled for 2001–05 and will be a survey of schools, teachers and students, focusing on the impact of ICT on the skills and competencies they will need for the information society.

Australia did not participate in M1, but is participating in the fieldwork data collection for M2 and is yet to decide on participation in M3. The goals for M2 are to:

- identify and provide rich descriptions for innovative, technology-based pedagogical practices that are considered valuable by each country
- provide information to national and local policy makers that they can use to make decisions related to ICT and the role it might play in advancing their country's educational needs and goals
- provide teachers and other practitioners with new ideas about the use of ICT to improve classroom practices
- add to the body of research knowledge and theory about the contexts and factors within and across countries that

contribute to the successful and sustained use of innovative, technology-based pedagogical practices

- investigate the measurement quality of M1 indicators and contribute to the development of M3 assessments.

## Recommendations of the report

In its recommendations to the taskforce, the report proposes a framework for national assessment and reporting of students' ICT skills and knowledge, with the following key elements:

- a definition of ICT as 'technologies used for accessing, gathering, manipulation and presentation or communication of information'
- assessment of a national sample of students at two levels of schooling (year 5 or 6 and year 9 or 10) every two years, with the possibility of a three-year cycle once the assessment regime is in place
- three assessment domains:
  - access to ICT
  - attitudes towards and confidence in the use of ICT (for the older cohort only)
  - ICT skills and knowledge
- a range of assessment methodologies, including:
  - self-reporting of access to ICT
  - self-assessment of attitudes towards and confidence in the use of ICT (through PISA and SITES for the older cohort)
  - teacher observation
  - pencil-and-paper and computer-based assessment of ICT skills and knowledge.

The NEPMT endorsed the definition of ICT and the general thrust of the recommendations in August 2000, noting that further work would be required on defining the knowledge and skills to be assessed. It is expected that education ministers will consider the proposed framework at their next meeting in mid-2001. In the meantime, the NEPMT has begun a developmental process that, in its first phase, will produce an approach to the design, trialing and implementation of assessment instruments for the three domains recommended in the report.

## EdNA Schools Advisory Group

In March 2000, MCEETYA endorsed Learning in an Online World as the school education action plan for the information economy. Learning in an Online World is one of a set of action plans supporting change across all sectors of Australian education and training, developed through the EdNA Schools Advisory Group. The action plans represent a significant commitment to collaboration across Australia to ensure that students develop the knowledge and skills they need to live and work in a society marked by rapid technological change. Learning in an Online World has two overarching goals:

- All students will leave school as confident, creative and productive users of new technologies, including ICTs (from the National Goals for Schooling in the Twenty-first Century)
- All schools will seek to integrate ICTs into their operations, to improve student learning, to offer flexible learning opportunities and to improve the efficiency of their business practices.

The action plan recognises that school education provides the foundation for the information economy and the knowledge society. The plan provides an agreed framework of five key action areas and identifies strategies that school education stakeholders can use to take change forward. It also identifies three priority areas (bandwidth, professional development and online content) that all education authorities need to address individually and collaboratively if Australia is to meet the challenges of preparing young people for the future.

The five interrelated action areas are:

- people
- infrastructure
- content and services
- supporting policies
- enabling regulation.

The EdNA Schools Advisory Group has responsibility for reporting progress annually to MCEETYA. The first progress report will be provided to ministers in 2001.

## State and Territory reports

Some States and Territories provided the following additional information in relation to their ICT policies and strategies.

### New South Wales

The government's Plans for Education and Training 1999–2003 foreshadowed the introduction of statewide external Computer Skills Assessment for all years 6 and 10 students to determine their knowledge, skills and understanding in the use of ICT. Preliminary work proceeded during 2000 to develop the assessments, which are to be trialed during 2001.

The Computer Skills Assessment for year 6 students will assess information communication skills, including:

- using computer-based technologies to locate, access, evaluate, manipulate, create, store and retrieve information
- expressing ideas and communicating with others, using computer-based technologies
- developing an awareness of the range of applications of computer-based technologies in society
- discriminating in the choice and use of computer-based technologies for a given purpose
- exploring, adapting and shaping technological understandings and skills in response to challenges now and in the future.

These skills will be developed within the six key learning areas of the curriculum and the assessments will have a practical component.

The year 10 Computing Skills Assessment to be conducted by the Board of Studies will require students to demonstrate certain computer competencies over the course of the year. These may include Internet research, desktop publishing and layout, computer design and advanced word processing. The year 10 assessment will explore knowledge, skills and understanding that are already delivered across the curriculum. There will not be a new and separate course of study. At the end of year 10, students will receive a certificate listing their skills, along with the reporting of results for the other School Certificate tests.

The Board of Studies is also developing new Higher School Education (HSC) courses in IT. The field of information systems has become a major growth area for employment in recent years. In 2000, year 11 students across New South Wales had the opportunity to study three new Board Developed Courses in the field of computer-based technology as part of the new HSC curriculum. Also available were 2-Unit courses in Information Processes and Technology, and Software Design and Development, and a VET curriculum framework in IT.

The Information Processes and Technology course teaches students about information-based systems. It covers the processes of collecting, organising, analysing, storing and retrieving, processing, transmitting and receiving, and displaying information, as well as the technologies that support them. With this background, students will be well placed to adapt to new technologies as they emerge.

The Software Design and Development course focuses on the development of computer-based solutions that require the design of computer software. It provides students with a systematic approach to problem-solving, and the opportunity to be creative and acquire the knowledge, values and communication skills required to develop computer programs.

The Information Technology Curriculum Framework is one of seven Board Developed VET courses developed for the new HSC that allow students to gain both HSC qualifications and Australian Qualifications Framework (AQF) VET accreditation. VET AQF qualifications are recognised by industry and employers throughout Australia. Each framework is made up of units of competency drawn from national training packages. Students undertaking these HSC VET courses are required to complete a minimum number of hours of work placement. Students who undertake an optional written HSC examination in one of the 240-hour VET courses may have the result for that course included in the calculation of their University Admissions Index.

The Information Technology Curriculum Framework offers courses of 120, 180 and 240 hours duration, as well as a 60- or 120-hour extension course. The focus of the courses is the support and management of the use of IT. The courses provide opportunities for students to gain relevant technical, business and interpersonal competencies for a range of occupation areas, including computing software and hardware development, information systems management, telecommunications, printing and publishing, accounting, teaching and education, and research.

## Queensland

Education Queensland is very conscious of the need to ensure that schools and the system have access to and competence in the use of ICT. There is a growing need to develop performance measures to monitor and report on the teaching, assessment and skills in ICT education. At both the system and school levels Education Queensland has a range of measures that allow for the reporting on the integration of IT within key learning areas. Systemic data are collected on such ICT-related measures as the number of classrooms connected to school and corporate networks and to the Internet.

The Computers in Learning policy in Queensland focuses on the use of computers for the attainment of curriculum goals. This policy acknowledges that students need to develop skills and competencies in the use of computers, but the development of skills and competencies is not the overriding outcome focus. It is expected that performance gains through using learning technology will be assessed and evident in improvements in all key learning areas, across all levels of schooling. With school-based management it is expected that each school will monitor its own teaching and learning in relation to ICT skills and development.

The years 6–7 Primary Computer program was followed by the Schooling 2001 project, a wide-ranging and far-reaching initiative. This project focused on improved access to learning technology, improved standards of teacher technology skills, whole-of-school ICT planning, access to quality software and a focus on student-centred learning. Data on the effectiveness of this project, gathered through a selective sample, can be found on <http://education.qld.gov.au/publication/production/reports/html/archive/archive.html>.

Education Queensland regularly monitors and gathers data on school workstations used for curriculum-related purposes. This yields measures such as the ratio of students to computers, the number of computers using the managed Internet service, the number of workstations connected to school networks, and the number of workstations utilising the Microsoft Enterprise Agreement. At a systemic level, Education Queensland also monitors and tracks school and classroom use of the Internet.

Education Queensland has established minimum standards for teachers in the area of learning technology. These standards address four domains of technology use for classroom teachers: IT skills, classroom applications, school planning, and

student-centred learning. The complete continua of teacher professional development for ICTs have been published in draft format.

At a whole-of-government level, the Department of Communication and Information, Local Government, Planning and Sport has developed the Information Technology & Telecommunications (IT&T) Skills in the Smart State policy framework as well as the Queensland Communication & Information Strategic Plan 2-Year Action Plan 2001–02. Both plans identify strategies and critical measures for IT skills in schools. Data from the national IT&T Skills Survey will assist in the process of monitoring and assessing progress.

## South Australia

The South Australian Department of Education, Training and Employment (DETE) has a birth-to-year-12 approach to developing ICT competence. ICT is a prominent part of the new curriculum, the SACS Framework. In the new curriculum ICT is embedded in all learning areas through the Essential Learnings.

ICT competencies will be further articulated in the form of an industry-recognised qualification to be called Certificate I in Information Technology, which will be mapped against AQF Certificate I. Profiling of ICT skills and knowledge of all year 10 students will begin at primary level. Schools will start to deliver the Certificate I in Information Technology in 2001.

Other developments planned include the introduction of new VET IT courses in the South Australian Certificate of Education (SACE) as well as increased delivery of vendor-based programs to the senior years curriculum. ICT skills assessment software, and online delivery courses in multimedia are being trialed in a number of schools as possibilities for ICT competency testing, auditing and delivery.

Catholic Education, SA and the Association of Independent Schools of South Australia have been collaborating with DETE in the development of the SACS Framework. These non-government systems have been following a complementary approach to ICTs. As is the case with DETE, ICTs are not seen as subject areas per se; rather they are embedded across all learning. The Framework seeks to ensure that all students are 'work ready' on leaving schools through a set of competencies which, when coupled with the Essential Learnings, assist students to be socially and critically active in their world, and to have the capacity to apply technology and to explore and adapt systems.

## Tasmania

Tasmania has an ICT infrastructure of:

- computers in schools (current computer–student ratio of 6 to 1)
- a team of six full-time school support IT specialists
- a group of network specialists assigned to each school (based on school size) and managed by the IT specialists
- a team of seven senior education specialists, who offer support to schools in the application of ICTs into the classroom.

Over 70 per cent of teachers now have basic competencies in the use of computers, so that the current thrust is in professional learning for the integration of ICTs into the classroom. The education specialists look at creating a culture of integration in which success indicators are measured in terms of student outcomes.

A new centre of excellence in online learning has been established to develop and research online delivery of content and professional learning as well as develop online content. The focus of the centre is the classroom and the integration of ICTs into all educational programs from Kindergarten to year 12. The content is based on the concept of 'objects' that children and teachers can select as they need them.

Tasmania currently has no measures of ICT student outcomes, other than in formalised years 11 and 12 subjects. These, however, will be developed in the future.

## Australian Capital Territory

To support the moderation of assessment across the system, an interactive assessment tool is currently being developed. It will provide objective assessment of some aspects of the ICT competencies, and will validate classroom-based assessment of student performance. Implementation of this assessment tool is planned for second semester, 2001.

## ICT case studies

Case studies have been included:

- to demonstrate practice at school and system levels
- to allow schools to compare their own practice and to make judgements about improvement
- to provide public recognition of outstanding school programs and achievements.

They are intended to show examples of practice in:

- school organisation, pedagogy and curriculum
- school performance, measurement and review
- professional development, teacher education and system improvement
- organisation, pedagogy and assessment in particular key learning areas
- the development of school–community and school–business links
- provision for particular equity groups
- management at school and system levels.

## IT for year 10 students, ACT government schools

### Government commitments

The ACT government made Information Technology for year 10 students one of its key result areas for 1999. The target was that by 2001 ninety-five per cent of year 10 students in government schools would gain certification in IT competencies.

### Where to start

The government made the needs of students and ACT business its starting point. The ICT competencies and certification were determined through detailed discussion between ACT industry and curriculum experts. Through this process, competencies that extended the students and gave them skills that were attractive to potential employers were developed.

### What are the competencies?

There are five competencies, which are assessed at the school level. They are:

- information access processes and tools
- communication and collaboration processes and tools
- organisational processes and tools
- authoring processes and tools
- presentation and visual display processes and tools.

## School organisation, pedagogy and curriculum

A whole-school approach was adopted to enable the integration of ICT into all curriculum areas. This strategy ensured the assessment of ICT competencies across the curriculum.

It was important that the initiative was not dependent upon an individual staff member. A team approach was needed to ensure a whole-school approach and to protect against disruption to student study programs caused by the loss of key staff through transfer, promotion or illness.

The teaching strategy that supports the program is based on the principles outlined in the information access, cross-curriculum perspective statement, *Information Access Curriculum Support Paper: Incorporating Information Literacy and Information Technology* (Department of Education and Training, 1997).

Information Access encompasses two elements of the curriculum: information literacy and information technology. They meet in the effective educational use of information through the integrated use of computer equipment, related technologies and software, with the skills necessary to create, locate, use, organise, present and evaluate traditional and electronic information. Information Access emphasises attitudes and processes rather than content.

There was an expectation that each school would review its curriculum to ensure that there were opportunities for all students (but particularly students in year 10, as they were the focus group for this initiative) to demonstrate, within an appropriate and relevant context, the ICT competencies.

## School performance measurement and review

A reporting database was developed and installed in each high school. Teachers used this database to record individual student performance. The method of collecting student results for entry into the reporting database differed between schools. In some schools individual teachers entered the results for their students; in others data entry was restricted to one or two staff.

A review and analysis of school progress was provided at the beginning of Term 4 based upon student data collected at the end of Term 3. Further reviews were made and provided to

schools throughout Term 4. School representatives completed an evaluation of the program on a voluntary basis. A complete report on the trial is being compiled.

## Development, teacher education and system improvement

The focus for high schools was the development of curriculum materials that integrated the use of ICT to support the improvement of student literacy and numeracy skills. Further support for teachers was available through professional development. The system emphasis for professional development during 2001 in all ACT schools is the integrated use of ICT by all teachers.

All pre-service education student teachers are required to develop, in conjunction with a practising teacher, a unit of work that consists of at least two lessons and demonstrates the integrated use of ICT.

## Organisation, pedagogy and assessment in particular key learning areas

The integrated use of ICT at school level supports the teaching and learning processes in a natural and appropriate way in all learning areas. Examples have been collected for each key learning area that demonstrate the ways in which a range of ICT integration strategies could be used and assessed.

## The development of school–community and school–business links

The ACT Information Industry Development Board has endorsed the competencies as appropriate for year 10 students. While year 10 students have been the focus of the program, information about the program has also been widely distributed to primary schools, secondary colleges, two of the local universities, a number of non-government schools, and interstate and overseas. A range of print and web-based resources have been developed.

## Provision for particular equity groups

A review of current research literature on alternative assessment programs that recognise the needs of students with learning

difficulties indicated that it was possible and appropriate to offer such an alternative ICT competencies assessment program. In consultation with a number of teachers who work with students with a range of identified learning needs, an alternative program was developed and run as a pilot during 2000.

While the 2000 pilot of the alternative assessment program in ACT special schools with students in year 10 was relatively successful, the range of differences in educational needs between the students in these schools was broader than the range of competencies that were described. As a result, a review will be undertaken to ensure that issues that have been raised are addressed.

## Management at school and system levels

Staff representatives from each high school attended one of three information sessions during March 2000. In addition to providing information for use in the schools and resource materials, discussion covered:

- what the competencies were
- how they could be integrated into the curriculum (if not already there)
- how they were to be assessed by the classroom teacher
- how the results should be entered into the reporting database
- the services and resources that were available to schools to support the program
- the importance of schools receiving 'start up' funding.

## Year 2000 results

Seventy-five per cent of year 10 students in 2000 received an Information and Communication Technology Competencies Certificate.

## 2001

Planning is well under way to achieve the goal of 95 per cent of year 10 students in 2001 attaining the full set of competencies.

## NSW HSC Online, New South Wales Department of Education and Training and Charles Sturt University

### Description of the initiative

NSW HSC Online is a joint venture between the NSW Department of Education and Training and Charles Sturt University. The project is supported by the Board of Studies NSW and the Professional Teachers' Council. The website has been developed to support students sitting for the new HSC and contains syllabus-focused material prepared by experienced teachers and academics. There are 38 subjects or nodes, each with a node coordinator and a writing team.

The site is especially valuable for students and teachers in rural and isolated areas, providing them with improved access to a range of relevant resources.

The site has a dedicated project officer with additional support and quality assurance provided by the key learning area managers and a team of CSU academics. The node teams are funded by release from teaching or by fee-for-service payments.

Improvements in available technologies have resulted in the inclusion of a range of new facilities. Multimedia features such as sound and video are used to create interactive activities and resources, including speaking and listening tasks; demonstrations of staging, movement and experiments; interactive quizzes and virtual visits to galleries, museums, exhibitions and other subject-specific excursions.

The new nodes include four VET subjects: Hospitality, Information Technology, Metals and Engineering, and Primary Industries. The site also includes sections on study and exam techniques, careers and further education and professional development for teachers. In response to requests by students and teachers, a new section has been added to provide support for the parents of HSC students.

### Evaluation of the initiative

In 1999 the quality of the NSW HSC Online website was recognised by a Premier's Public Sector Award for excellence in service delivery. In 2000, the site achieved up to 80,000 hits per day in the weeks leading up to and during the HSC examinations. With the introduction of the new HSC the site was totally redesigned to reflect the requirements of the new stage 6 courses. An evaluation of the old site informed the redesign of the service.



## Chapter 11

# Indigenous education

## Introduction

The National Aboriginal and Torres Strait Islander Education policy, which has been in place since 1990, commits all Australian governments to work towards educational equity for Indigenous Australians.

At its tenth meeting in April 1999, the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) agreed that the achievement of educational equality for Australia's Indigenous people was an urgent national priority. A Taskforce on Indigenous Education was established and directed to report back to MCEETYA in 2000.

In its report to MCEETYA in March 2000, the taskforce identified a number of issues that it considered were impeding the achievement of educational equality for Indigenous students:

- There are lingering perceptions in some quarters of the Australian community that the gap in educational outcomes between Indigenous and non-Indigenous Australian students is 'normal' and that educational equality for Indigenous Australians is either not achievable, or if possible, only achievable over a long period of time (ie decades or generations).
- There is often a systemic lack of optimism and belief in educational success for Aboriginal and Torres Strait Islander students.
- Education of Indigenous students is not often regarded as an area of core business in education systems.
- Aboriginal and Torres Strait Islander teachers and education workers are often denied access to facilities and services that other teachers and education workers take for granted and that are covered by legislation.
- Initiatives to develop more effective models of education that build on, replicate and sustain progress in the achievement of equitable educational outcomes for Indigenous students often fail to be implemented systemically and/or at the local level.
- While there is widespread acknowledgement of the close relationship between low levels of Indigenous educational outcomes and poverty, health, housing and access to government services and infrastructure, there is a lack of efficient and effective mechanisms to address cross-portfolio issues for Indigenous students.

After considering the report from the taskforce, the Australian ministers of education agreed to undertake further work to

accelerate progress in addressing these issues. This work was to include the promotion and implementation of the following:

- 1 A statement of principles and standards for educational infrastructure and service delivery: The statement uses the National Goals on Schooling to underpin the set of principles and standards. The principles are described in terms of rights to a high-quality education. The standards are described in terms of the rights of Indigenous students and their teachers to access the same level of government services as other Australians.
- 2 A model for more culturally inclusive and educationally effective schools: The model is designed for schools and systems to create a climate of sustainable change and encourage successful outcomes of Indigenous programs to be absorbed into mainstream practice.
- 3 A framework for developing more efficient and effective cross-portfolio mechanisms: The cross-portfolio framework gives a new perspective to the planning and delivery of services and programs.

The taskforce will report back to MCEETYA in 2001 with:

- further advice on making the achievement of educational equality for Australia's Indigenous peoples an urgent national priority in the early childhood, vocational education and training, and higher education sectors
- a progress report on the implementation of the statement of principles and standards, the model for culturally inclusive schools and the cross-portfolio framework, and the impact of relevant Commonwealth and State/Territory legislation on Australian Indigenous teachers and other Australian Indigenous education workers.

In addition, discussions will be held with the Health and Community Services Ministerial Council and the Ministerial Council on Aboriginal and Torres Strait Islander Affairs on cross-portfolio issues.

## The National Indigenous English Literacy and Numeracy Strategy (NIELNS)

During 2000, NIELNS was launched. The strategy's objective is to ensure that Indigenous students reach levels of literacy and numeracy comparable with other Australians through methods such as raising school attendance rates, addressing health problems that undermine learning, attracting and retaining

good teachers and using the most effective teaching methods. The strategy requires all States and Territories to develop an implementation plan that sets out how they will use their own resources, as well as the Commonwealth's mainstream recurrent grants and Indigenous-specific supplementary funding to achieve the goals of the plan.

To support NIELNS, a number of Indigenous Ambassadors were appointed as spokespeople to help promote the aims of the strategy to Indigenous students. The Ambassadors were achievers and role models in their respective fields, which covered education, sport and other professions. During 2000, the Ambassadors participated in many school visits, meetings with parent committees, and larger events such as the Croc Eisteddfods and key national conferences. The Ambassadors Programme is being extended into 2001 and will support the range of initiatives that will be rolled out under State implementation plans.

Additional information on NIELNS is available at <http://www.dest.gov.au/schools/indigenous/nielns.htm>.

## Indigenous education outcomes in 2000

Previous editions of the *National Report on Schooling in Australia* (especially 1997 to 1999) described the continuing level of educational disadvantage faced by Indigenous students in Australian schools. Information provided in those reports on literacy, numeracy, retention rates, grade progression rates and attendance has been updated in this edition to include the outcomes for 2000.

Much of the data reported in this section is derived from State and Territory school systems as part of the reporting and monitoring framework introduced for the Commonwealth's Indigenous Education Strategic Initiatives Programme (IESIP) for the 1997–2000 funding quadrennium. The criteria for inclusion of data in this section were:

- ability to outline progress in increasing the attainment levels of Indigenous students and reducing the gap between Indigenous and non-Indigenous outcomes
- the availability of complete and consistent data over a number of years. Some States have data in a consistent format, spanning five years. Sections of those States' IESIP Reports are included below.

Currently, there are differences in the bases for assessment and reporting by the States and Territories in most areas of Indigenous education outcomes reporting. This means that progress can be monitored over time only at the jurisdictional/education provider level. This makes it difficult to assess progress in the improvement of Indigenous education outcomes on an overall national basis. The problem was addressed by MCEETYA at its April 1999 meeting, when ministers endorsed a core set of performance indicators for use under IESIP for the 2001–04 funding quadrennium. The indicators should provide greater consistency between jurisdictions in reporting, thereby providing a more comprehensive picture at the national level of improvements for Indigenous students.

## Literacy

Table 11.1 shows the mean test scores in the Basic Skills Test (BST) for literacy in years 3 and 5 students in the NSW government school system from 1996 to 2000.

These data suggest there has been a decline in the difference between the mean score of all students and that of Indigenous students over the five-year period in year 3. While the trend is not as evident for year 5, the outcomes for recent years are encouraging.

Table 11.2 shows the results of testing in the Achievement Improvement Monitor (AIM) in Victorian government schools from 1996 to 2000 for years 3 and 5 reading and writing. The data provide the percentages of all students and Indigenous students who achieved in the upper two Curriculum and Standards Framework (CSF) levels and the lower two CSF levels for the year level in question. Also provided is the gap between the percentage of all students and the percentage of Indigenous students who achieved in the upper two levels.

The data suggest that the gap between the percentages of all students and the percentages of Indigenous students achieving in the upper two levels for writing in both years 3 and 5 has been closing steadily since 1996. Although the rate of progress stalled a little in 2000, there was a consolidation of the gains of the previous few years. The gap in year 5 reading declined steadily up until 2000, but there has been no evidence of any improvement in the year 3 reading outcomes over the five-year period.

Table 11.3 shows the percentage of years 3 and 5 students in South Australian government schools who were identified by the BST in 1996 to 2000 as requiring special literacy intervention.

**Table 11.1 Mean Basic Skills Test literacy scores, government schools, NSW, 1996–2000**

	Year 3					Year 5				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Indigenous students	44.3	44.7	44.3	46.1	46.0	51.2	51.2	51.1	51.7	51.5
All students	49.3	49.7	49.2	50.3	50.0	56.3	56.6	56.2	56.6	56.2
Gap	5.0	5.0	4.9	4.2	4.0	5.1	5.4	5.1	4.9	4.7

Source: IESIP Performance Reports, Department of Education and Training, New South Wales

**Table 11.2 Comparative AIM literacy performance, years 3 and 5, government schools, Victoria, 1996–2000 (per cent)**

	1996			1997			1998			1999			2000		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
<b>Year 3 reading</b>															
Levels 1 and 2	70.5	48.5		70.5	42.1		57.8	31.7		59.2	30.4		62.0	31.1	
Levels 3 and 4	29.5	51.9	22.4	29.5	57.9	28.4	42.3	68.3	26.0	40.8	69.5	28.7	38.0	68.9	30.9
<b>Year 5 reading</b>															
Levels 2 and 3	70.4	38.8		76.4	47.1		86.6	58.7		77.7	50.6		76.3	46.0	
Levels 4 and 5	29.5	61.2	31.7	23.6	53.0	29.4	13.4	41.3	27.9	22.3	49.3	27.0	23.7	54.0	30.3
<b>Year 3 writing</b>															
Levels 1 and 2	82.2	49.3		74.2	41.7		66.0	36.0		54.0	26.7		56.8	29.1	
Levels 3 and 4	17.8	50.7	32.9	25.8	58.3	32.5	33.9	64.0	30.1	46.0	73.3	27.3	43.2	70.9	27.7
<b>Year 5 writing</b>															
Levels 2 and 3	71.6	35.4		80.6	49.7		88.9	59.7		75.4	48.4		76.6	47.9	
Levels 4 and 5	28.3	64.6	36.3	19.5	50.3	30.8	11.0	40.3	29.3	24.7	51.6	26.9	23.4	52.2	28.8

A = Indigenous students

B = All students

C = The gap (B–A)

Note: CSF Level 1 is the standard expected for students on completion of the first year (preparatory) of schooling; Level 2 is to the end of year 2; Level 3 is to the end of year 4; Level 4 is to the end of year 6; and Level 5 is to the end of year 8.

Source: IESIP Performance Reports, Department of Education, Employment and Training, Victoria

**Table 11.3 Students requiring special literacy intervention, years 3 and 5, government schools, South Australia 1996–2000 (per cent)**

	1996	1997	1998	1999	2000
<b>Year 3</b>					
Indigenous students	71	74	75	65	72
All students	39	41	48	37	40
Gap	32	33	27	28	32
<b>Year 5</b>					
Indigenous students	69	62	68	63	65
All students	31	28	32	29	33
Gap	38	34	36	34	32

Note: Identification by BST.

Source: IESIP Performance Reports, DETE, South Australia

These data show there has been little change in either the percentages of Indigenous year 3 students identified as requiring special literacy intervention or the gaps between the percentages of Indigenous students and all students in year 3 requiring assistance over the five-year period. The situation appears to be more promising in year 5 – the data suggest that a downward trend in the gap might be emerging.

## National literacy benchmarks

The results of assessments against the national benchmarks for reading in years 3 and 5 are set out in year 2000 benchmark results. In this report, the relative performance of Indigenous students is highlighted in Table 6.12 and Figures 6.2 and 6.3 of Chapter 6, 'Literacy student outcomes'. The results indicate a significant gap in achievement between all students and Indigenous students in each of years 3 and 5.

## Program for International Student Assessment (PISA) 2000

A summary of the results obtained from this international study is presented in Chapter 6, 'Literacy student outcomes'. The gap evident in the national benchmark results is also apparent for the 15-year-old students in this survey.

## Numeracy

Table 11.4 provides the mean numeracy scores in the BST in New South Wales government schools for years 3 and 5 for the period from 1996 to 2000. Unlike equivalent outcomes in literacy (see Table 11.1), there appears to be no discernible

trend downwards in the difference between the mean scores of all students and Indigenous students in numeracy.

Table 11.5 shows the results of testing in the AIM in Victorian government schools from 1996 to 1999 for years 3 and 5 Number and Measurement. As for the equivalent data for literacy (see Table 11.2), the outcomes are aggregated for the upper two CSF levels and the lower two CSF levels for the year level in question.

The data suggest that the gaps between the percentages of all students and the percentages of Indigenous students attaining in the two upper levels in Number and Measurement outcomes in numeracy in years 3 and 5 have widened over the five-year period 1996–2000.

**Table 11.4 BST mean numeracy scores, years 3 and 5, government schools, NSW, 1996–2000**

	Year 3					Year 5				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Indigenous students	47.1	46.4	46.4	47.1	46.1	53.7	53.8	53.6	53.3	53.2
All students	53.5	52.0	52.1	52.5	51.7	60.0	60.0	60.0	60.2	59.5
Gap	6.4	5.6	5.7	5.4	5.6	6.3	6.2	6.4	6.9	6.3

Source: IESIP Performance Reports, Department of Education and Training, New South Wales

**Table 11.5 Per cent of students achieving at CSF levels, years 3 and 5, government schools, Victoria, 1996–2000**

	1996			1997			1998			1999			2000		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
<b>Year 3 number</b>															
Levels 1 and 2	63.3	41.8		54.1	36.2		70.4	45.0		45.1	23.4		54.4	27.1	
Levels 3 and 4	36.6	58.2	21.6	45.8	63.7	17.9	29.6	55.1	25.5	54.9	76.7	21.8	45.6	72.9	27.3
<b>Year 5 number</b>															
Levels 2 and 3	89.4	66.2		86.7	65.5		78.5	51.7		78.8	53.6		73.5	44.7	
Levels 4 and 5	11.6	33.8	22.2	13.3	34.5	21.2	21.6	48.3	26.7	21.2	46.4	25.2	26.4	55.3	28.9
<b>Year 3 measurement</b>															
Levels 1 and 2	52.6	31.7		58.1	33.7		77.0	51.3		54.9	29.0		61.3	34.6	
Levels 3 and 4	47.4	68.3	20.9	42.0	66.3	24.3	23.0	48.7	25.7	45.0	71.0	26.0	38.7	65.4	26.7
<b>Year 5 measurement</b>															
Levels 2 and 3	88.5	72.9		90.7	71.2		78.9	49.8		78.5	48.5		76.7	47.8	
Levels 4 and 5	11.6	27.2	15.6	9.4	28.8	19.4	21.1	50.2	29.1	21.4	51.1	29.7	23.2	52.2	29.0

A = Indigenous students

B = All students

C = The gap (B–A)

Note: CSF Level 1 is the standard expected for students on completion of the first year (preparatory) of schooling; Level 2 is to the end of year 2; Level 3 is to the end of year 4; Level 4 is to the end of year 6; and Level 5 is to the end of year 8.

Source: IESIP Performance Reports, Department of Education, Employment and Training, Victoria

Table 11.6 shows the percentage of year 3 and year 5 students in South Australian government schools who were identified by the BST in 1996 to 2000 as requiring special numeracy intervention. As with the New South Wales and Victorian government school data, the South Australian government school data provides no evidence of improvements in the numeracy attainment levels of Indigenous students on average over the five-year period.

## National numeracy benchmarks

The results of assessments against national benchmarks for numeracy, published for the first time this year, are available in Chapter 7, 'Numeracy student outcomes'. They demonstrate a significant gap between the performance of all students and that of Indigenous students.

**Table 11.6 Per cent of students requiring special numeracy assistance, years 3 and 5, government schools, South Australia, 1996–2000**

	1996	1997	1998	1999	2000
<b>Year 3</b>					
Indigenous students	74	72	73	71	77
All students	38	42	43	39	44
Gap	36	30	30	32	33
<b>Year 5</b>					
Indigenous students	68	64	60	68	73
All students	34	29	27	31	37
Gap	34	35	33	37	36

Note: Identification by BST.

Source: IESIP Performance Reports, DETE, South Australia

## PISA 2000

A summary of the results of this international study, conducted in 2000, is presented in the section on Numeracy Student Outcomes where attention is drawn to the relatively low achievement of Australia's Indigenous students.

## Apparent retention

The apparent retention of Indigenous students from the commencement of their secondary schooling through to years 10, 11 and 12 remains significantly below the retention of other Australian students, with the Indigenous year 12 apparent retention rate only around half the rate of non-Indigenous students. However, as Table 11.7 demonstrates there has been a steady improvement in the apparent retention rate of Indigenous students to year 12 since 1996, with the Indigenous apparent retention rate to year 12 now at 36.4 per cent. There has also been a steady improvement in the apparent retention rate of Indigenous students to year 11 since 1996. However, the 2000 figures suggest that this has fallen again, which does not augur well for further significant improvement in the year 12 apparent retention rate in 2001.

Table 11.8 sets out year 10, 11 and 12 apparent retention rates for Indigenous and non-Indigenous students by State and Territory for 2000. Extreme caution should be taken in interpreting this data. It needs to be borne in mind that small numbers of Indigenous students in some States and Territories may result in apparent variations in retention from year to year which may not accurately reflect the long-term trend.

**Table 11.7 Apparent retention rates, Australia, 1994–2000 (per cent)**

	1994	1995	1996	1997	1998	1999	2000
<b>Year 10</b>							
Indigenous	78.6	76.5	75.8	80.6	83.1	82.0	83.0
Non-Indigenous	97.4	96.9	97.3	97.6	97.5	97.9	98.0
<b>Year 11</b>							
Indigenous	47.5	48.8	47.2	49.6	52.3	56.0	53.6
Non-Indigenous	86.3	84.1	84.3	85.3	85.4	86.4	86.2
<b>Year 12</b>							
Indigenous	32.5	30.6	29.1	30.9	32.1	34.7	36.4
Non-Indigenous	75.6	73.2	72.4	72.9	72.7	73.2	73.3

Note: These derived statistics are based on full-time enrolments only.

Source: DETYA, derived from *National Schools Statistics Collection*

**Table 11.8 Apparent retention rates to years 10,11,12, by State and Territory, 2000**

	Year 10		Year 11		Year 12			
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous		
	per cent	per cent	per cent	per cent	per cent	no.	per cent	no.
New South Wales	80.7	96.9	44.6	79.2	33.9	639	68.3	56,205
Victoria	85.2	97.6	54.9	91.1	33.7	106	77.5	46,397
Queensland	92.7	100.6	64.6	89.5	52.3	1,110	78.4	38,714
South Australia	74.0	95.1	47.6	87.5	24.2	105	66.3	12,867
Western Australia	85.8	100.5	49.7	88.3	23.1	287	73.7	18,894
Tasmania	95.3	97.0	74.9	81.8	44.0	149	70.8	4,812
Northern Territory	48.6	91.5	45.1	80.8	18.9	111	59.7	1,076
Australian Capital Territory	88.1	98.2	61.0	100.8	61.4	35	87.4	4,303
Australia	83.0	98.0	53.6	86.2	36.4	2,542	73.3	183,268

Notes:

- 1 Year 12 apparent retention rates measure the proportion of students who appear to have been retained to year 12 from the commencement of their secondary school studies and are reported by States on the assumption that they are studying at year 12 level in school. The calculation is based on the cohort of students in the system at the commencement of secondary schooling in relation to those in year 12 in the current year. Ungraded students are not included, even though they may have been graded at the year of commencement of secondary schooling.
- 2 Apparent retention rates can be inflated by a net increase in interstate migration and by an increased propensity to identify as Indigenous over time. These factors can result in apparent retention rates in excess of 100 per cent.
- 3 These derived statistics are based on full-time enrolments only.

Source: DETYA, derived from *National Schools Statistics Collection*

It should also be noted that apparent retention rates in excess of 100 per cent might result from a net increase in interstate migration or by students repeating a year. Apparent retention rates for Indigenous students can also be affected if students who are not identified as Indigenous when they first enrol in secondary school are subsequently identified by their parents, or choose to identify themselves, as Indigenous during the latter years of secondary schooling.

## Grade progression

Table 11.9 shows the 2000 grade progression ratios from years 8–12 for Indigenous and non-Indigenous students in Australia. This shows that Indigenous students leave schooling at every transition point at a rate which is significantly higher than for non-Indigenous students. The Indigenous grade progression ratio from year 10 to 11 fell in 2000 to 65.4 per cent from the 1999 level of 67.4 per cent. The Indigenous grade progression ratio from year 11 to year 12 fell from 66.4 per cent to 65.0 per cent.

## Attendance

Attendance data from government school systems in 2000 continued to show that on average, Indigenous students were absent from school significantly more often than non-Indigenous students.

**Table 11.9 Grade progression rates, years 8–12, Australia, all schools, 2000 (per cent)**

	Indigenous	Non-Indigenous
Year 8 to year 9	94.2	99.8
Year 9 to year 10	88.4	98.1
Year 10 to year 11	65.4	88.1
Year 11 to year 12	65.0	84.8

Source: DETYA, derived from *National Schools Statistics Collection*

## Victorian government schools

School attendance by Indigenous students in Victorian government schools was much improved in 2000 compared with recent years: the mean number of days absent was 24 days, compared with 15 days for non-Indigenous students. The mean number of days absent reported for Indigenous students in both 1998 and 1999 was 32 days.

## Western Australian government schools

The average attendance of Indigenous primary school students in 2000 was 84 per cent, compared with 95 per cent for

non-Indigenous primary school students. For secondary students, the average attendance rate of Indigenous students was 76 per cent, compared with 92 per cent for non-Indigenous students.

## South Australian government schools

The average attendance rate of Indigenous students in 2000 was 84.2 per cent compared with 92.7 per cent for all students.

## Queensland government schools

Indigenous students in Queensland government secondary schools were absent on average for 26.0 days in 2000 while non-Indigenous students were absent on average for 15.6 days.

# Case studies

## Koorie Links projects, Victoria

There are countless reasons why some students struggle with the acquisition of literacy skills.

Two Koorie Links projects, presently operating in Victoria, are addressing these issues. The Koorie Literacy Links project concentrates on the early years of schooling (Prep to year 4) and the Koorie Middle Years Links project on years 5–9. There are 20 government schools, three Catholic schools and one independent school involved across the two projects. The schools have significant numbers of Koorie students and are located in the metropolitan and rural areas of Victoria. The furthest school is six and a half-hours from Melbourne and some of the project schools are up to ten hours (by car) apart.

These innovative projects have many insights to offer teachers of all students who are learning to read and write. The projects utilise videoconferencing as a literacy tool and incorporate the extensive use of software and information technology.

The initial aims of the projects were to build on proven successful literacy models and to extend them to targeted Koorie student groups through the use of learning technologies. Inherent in this was the need to improve teacher understanding about Koorie education issues through professional development and to further extend the outcomes from these projects to curriculum leaders in participating schools and beyond.

## Process and procedures

### Data collection

Extensive data collection was undertaken at the commencement of the projects in order to establish baseline data from which gains could be measured. The monitoring of student progress and improvement has been ongoing and includes both standardised tests currently in use in Victorian schools and the regular documentation of anecdotal observations from both teachers and Koorie educators.

### School community teams

Teams were established in each school community, comprising literacy teachers, Koorie educators, Koorie Education Development Officers (KEDOs) and members from the Koorie community, in particular Local Aboriginal Education Consultative Groups. KEDOs support schools in Department of Education, Employment and Training (DEET) regions in matters concerning inclusive curriculum and improving educational outcomes for Koorie students.

### Professional development

Access to ongoing professional development has been a key feature of the projects and is conducted through regular multipoint videolinks. Residential conferences are also held twice yearly. Project coordinators regularly visit and communicate with project personnel, who are supported to attend and present at relevant State and national conferences.

### School community action plans

Each school community has been given the opportunity to identify the course of action best suited to their own students through the provision of additional funding support. This funding is allocated upon receipt of a School Community Action Plan that has been developed by project teams and is based on a whole-school approach to change. As the projects have evolved, the potential to involve the broader school community has been realised. The Koorie Literacy Links project has extended each year from Prep to year 2 and now encompasses Prep to year 4 students. The Middle Years Links project now incorporates the year 6 students from nearby schools.



## Videoconferencing

A schedule of multipoint videoconferences was established to link all participating schools and school communities. Through participation in these sessions, an exchange of best practice, resource information and mutual support between all the school teams has developed and strengthened over the course of the project. In the Koorie Literacy Links project, the multipoint videoconferences are held in two parts. Koorie educators, KEDOs and Koorie community members conduct the first part, with teachers joining the second part of the conference. This format was suggested to allow time for Koorie-specific issues to be addressed and discussed.

Point-to-point videoconferences between individual schools and smaller groups with shared interests are held on a regular basis. The initial focus of these projects was on adult participation, but when the potential for involving students, even in the early years of schooling, became apparent, these point-to-point link-ups became more frequent. Literacy-based activities are planned and shared over videolinks between the schools, which operate on a cluster basis. In some cases, students also have excursions at which they come together to meet in person. These activities have led to the development of shared, highly student-centred literacy activities, including the production of books related to the excursions.

Access to high-profile guest speakers, via videolink, has been another feature of the Links projects. Speakers have included Indigenous authors, DETYA NIELNS Ambassadors and links to interstate schools and places of interest.

## Outcomes

### Students – changes in students' attitudes and engagement

- Preparing and presenting to a 'real' audience, many of whom are known or related to the students, has had a great impact on the level of engagement and standard of work produced by students participating in these projects. Positive affirmation is provided by the immediate feedback available via videoconferencing and has been cited as an important aspect of the project. The students benefit from and enjoy collaborating with peers.

- Older students have made it clear that they value the use of the videoconferencing medium and a number of teachers have commented that it is the students that keep them on track. They are actively involved in developing a website to showcase their achievements. They are also proving to be good role models for the younger students and developing reading materials for use in Early Years classes.
- In direct contrast to an expected reticence when confronted by videoconferencing, most students have shown a capability and desire to communicate. School team members have noted increased confidence in students engaged in regular links – even young children are confident to present in front of large adult audiences. In one instance, Early Years students from two schools prepared and rehearsed with one another over the videolink and then presented 'live' in front of 80 adults at a statewide conference. In the opinion of Koorie educators and teachers, many of these students would have lacked the self-confidence necessary to achieve this prior to their experiences of preparing, rehearsing and presenting via videoconferencing. Classroom teachers who observe some students engaged in videoconferencing have been able to see a different side to these students. A number of students now have higher aspirations.

### Teachers – what makes a difference to how effective we are

- Participants in both projects have reported many gains from their involvement. The interactions and support available to teachers has meant that there has been a growing awareness, knowledge and understanding of the impact of Koorie English on the literacy development of Koorie students.
- Professional development sessions involving teachers, Koorie educators, KEDOs and community members have led to a productive sharing of knowledge and perceptions about students. The attitudinal shift that accompanies a growing sensitivity about and respect for Koorie lifeways and Koorie English has led to a number of experienced teachers changing or modifying their teaching practice. They have also commented on the subsequent impact that this has had on the attitude to learning displayed by a number of their students.

## Koorie educators – the unique contribution that can be made

- Koorie educators have stated that in many cases their status in the school and the opportunity for a more direct involvement in literacy programs has increased markedly. Participation in the projects has increased the technical competencies and confidence of Koorie educators who are contributing to improvements in literacy outcomes for Koorie students.
- In many cases, there is only one Koorie educator based in a school. Videoconferencing enables much better communication and sharing between these key members of the school community. Koorie educators involved in the projects are increasingly assuming leadership roles in the courses of further study offered to all Koorie educators.
- Literacy teachers and Koorie educators have acquired a broader knowledge of effective and recently published resources and regularly share information and ideas as to their best use.

## Community interactions

- Videoconferencing has also been used to link communities to their children when they are separated, for example during school excursions and hospital stays, and to link communities for the purpose of shared Aboriginal Student Support and Parent Awareness Scheme (ASSPA) committee meetings. These activities have enabled schools to be seen in a more positive light by some community members.
- Elders have agreed to conduct storytelling sessions with students, from which books will be produced. These books will form an important part of the culturally relevant reading material available to Koorie students in link schools. It is envisaged that these books may be published more widely and negotiations are currently being held with publishers.

## Youth and Community Learning Centre (YCLC), Toowoomba Diocese

In the Toowoomba Diocese of the Catholic sector, the YCLC was established in 2000 for young people who were out of the system and whose educational and training needs could not be met within existing facilities. The centre focuses primarily on the needs of young Indigenous people, although some non-Indigenous young people are also enrolled.

The following examples illustrate the achievements of the centre.

Ben came to YCLC at the beginning of Semester 2 2000. He had been excluded from a local high school for issues to do with anger management and drugs and alcohol. Ben was in year 9. As part of the program at YCLC he had the opportunity to access drug and alcohol support and the Outdoor Education Program, which focused strongly on problem-solving and conflict resolution. As a result, Ben developed strategies and skills which enhanced his tolerance and interpersonal relations. He worked steadily on his Mathematics and English using 'Successmaker' as a support resource. In 2001, Ben returned to mainstream school and is currently completing year 10. He chose to place himself in counselling. He is also drugs and alcohol free. We believe YCLC provided the necessary space for Ben to make some positive decisions.

Brendan, like Ben, came to YCLC because of anger management issues. He too has successfully re-entered mainstream at year 11 after completing his year 10 and is coping better. His teachers report a significant shift in his attitudes and in his self-esteem.

Kirsty successfully completed her year 10 Mathematics and English at YCLC and gained a Traineeship in Retail, which she accessed straight away.

Leanne completed post-compulsory studies and was successful in gaining a position in childcare in Stanthorpe. She began work the day after YCLC finished for the year.



## Chapter 12

# Future directions

Examination of the 2000 school year in Australia reveals a number of trends and developments that are likely to influence the future direction of Australian schooling.

## Enrolments

The trends identified in previous editions of the report have been confirmed in 2000. Total school enrolments grew to 3.247 million, an increase of 0.64 per cent on the previous year, and are projected to grow slowly to 3.314 million by the year 2010. The proportion of students enrolled in government schools continued to fall (69.2 per cent in 2000, compared to 69.7 per cent in 1999) and is projected to fall to 66.7 per cent by the year 2010 if current trends continue.

Falls in the numbers of government and Catholic schools were compensated by an increase in the number of independent schools, resulting in an overall increase of five schools since the previous year.

The number of students identifying as Indigenous in the school population continued to rise. Between 1999 and 2000, the number of Indigenous students increased by 4.6 per cent, from 106,628 to 111,527. As a result, Indigenous students represented 3.4 per cent of the school population in 2000.

## Performance measures

Australia's education ministers have agreed to monitor the progress of schools towards the achievement of the national goals for schooling. To this end, performance measures have been, or are being, developed in a number of areas. Where appropriate, these measures include assessment of student achievement in particular subject areas.

In literacy, performance against national benchmarks for reading in each of years 3 and 5 has been published for the last two years. Benchmarks for year 7 also exist and it is anticipated that the first publication of these results will be for the 2001 school year. Benchmarks for spelling and writing have been developed, but some problems remain regarding assessment using the various State and Territory-based instruments. In the case of writing, the comparability issues are close to resolution and it may be possible to publish results for the 2001 school year. It appears unlikely that problems in providing comparable spelling data will be overcome in the near future.

The Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) is continuing to investigate the possibility of developing literacy benchmarks for years 9 or 10 and is hopeful of using the results from the Program for International Student Assessment (PISA) 2000 to inform this process. PISA, developed by the Organization for Economic Co-operation and Development (OECD), is a large-scale international assessment of the skills and knowledge of 15-year-old students. It assesses the performance of students in three domains: reading literacy, mathematical literacy and scientific literacy. The cycle of assessments commenced in the year 2000 and is scheduled to proceed at three-yearly intervals. Although all three domains are tested in each assessment, the major focus for 2000 was reading literacy. Mathematics literacy will be the major focus in 2003 and scientific literacy in 2006.

The results of assessment against national numeracy benchmarks were published for the first time in this year's report. Benchmarks have been developed for year 7 and results of assessment against these will be published for the 2001 school year. As mentioned above, the assessment of the mathematical literacy of 15-year-old students will be the major focus of the 2003 PISA program.

Performance measures involving assessment of student achievement are also under development for science and information and communication technology (ICT). Initial investigations into science in the primary years recommended a paper and pen assessment comprising objective and open-ended items, together with some practical tasks. Should this approach be agreed, it would be administered to a representative sample of primary students in each State and Territory.

In 2000, ministers agreed to a recommendation that, for the time being, information obtained through participation in PISA will provide appropriate nationally comparable measures of the science achievement of secondary students. In agreeing to this recommendation, ministers were conscious that Australia was already committed to this program and that the assessment model it was using was compatible with that envisaged for national testing. Data will be collected on a triennial basis and report the achievement of students towards the end of the compulsory years of schooling. The first set of data is reported in the Science chapter of this report. The key performance measure derived from the PISA data is still to be developed and will be reported in a future National Report.

Ministers have also received a recommendation for a framework for national assessment and reporting of students' ICT skills and knowledge. The assessment of a national sample of students is proposed for two levels of schooling (year 5 or 6 and year 9 or 10) every two years, with the possibility of a three-year cycle once the assessment regime is in place. The proposal involves three assessment domains:

- access to ICT
- attitudes towards and confidence in the use of ICT (for the older cohort only)
- ICT skills and knowledge.

A developmental process has begun that, in its first phase, will produce an approach to the design, trialing and implementation of assessment instruments for the three domains recommended.

## Vocational education in schools

As outlined in other chapters of this report, there has been significant growth in the volume and nature of vocational education in schools. The growth has occurred with the assistance of funds provided by the Commonwealth and distributed through the Australian National Training Authority (ANTA). During 2000, ministers reviewed the progress that had been made and developed a new, broader framework for vocational education in schools.

The new framework addresses the needs of all students, not just those in the senior secondary years, and encompasses a broader range of initiatives, including an expanded role for business and community partnerships. It is to be progressively implemented in the period 2001–04 and comprises the following six mutually dependent elements:

- Vocational Education and Training: Appropriately accredited industry-specific training based on Australian Qualifications Framework (AQF) qualifications and competencies endorsed within the Australian Quality Training Framework (AQTF).
- Enterprise and Vocational Learning: Enterprise and vocational perspectives incorporated into general learning that is appropriate for all years of schooling.
- Student Support Services: Services that guide and support young people in their transition from compulsory schooling

to post-compulsory schooling options and post-school destinations, especially the inclusion of explicit career education programs in the school curriculum. Services will allow for local discretion over delivery and relate to participation and attainment in education, training and work.

- Business and Community Partnerships: Mechanisms that foster close cooperation among all levels of government, business, community organisation, education and labour market authorities.
- Effective Institutional Funding Arrangements: Policy coherence and effective program implementation through institutional arrangements for the organised and continuous involvement of all relevant players at the national, State and local levels.
- Monitoring and Evaluation: Data collection processes to provide information that will enable the effectiveness of current and future arrangements to be measured.

## States Grants (Primary and Secondary Education Assistance) Act

Towards the end of 2000 the Commonwealth Parliament passed the bill to introduce the *States Grants (Primary and Secondary Education Assistance) Act 2000*, which will provide financial assistance for primary and secondary schools for the period 2001–04. The new Act introduces some important changes particularly in the areas of accountability and reporting and the funding of non-government schools.

The Act introduces new accountability requirements aimed at strengthening the link between Commonwealth funding and improved outcomes for students. All education authorities, government and non-government, are required, as a condition of funding from 2001, to make a commitment to the National Goals for Schooling in the Twenty-first Century. They must also commit to achieving any performance measures (including targets) incorporated in the legislation. These targets and measures may be determined by the Commonwealth Minister but will, where possible, be those agreed to by the States and Commonwealth through MCEETYA, such as the national year 3 and 5 literacy and numeracy benchmarks.

Grants will not be affected by failure to meet performance targets, though education authorities may be required to report on action they will take to meet their commitments. Education authorities will report through the *National Report on Schooling in Australia*, as they have in the past. There is provision for financial penalties for failing to report, but these are substantially the same as provisions in past legislation.

The Act also introduces changes to Commonwealth general recurrent funding for non-government schools. Funding for these schools is to be allocated according to the socioeconomic status (SES) of the school community which involves linking student address data to Australian Bureau of Statistics (ABS) national Census data to obtain a measure of the capacity of the school community to support its school. The SES differs from the previous formula which measured the capacity of non-government schools to generate private income. The Act allows for increased funding of non-government schools to be phased in over the quadrennium.

Schools that would otherwise have their funding reduced under the new arrangements will have their year 2000 entitlements maintained in real terms. Funding for Catholic systems is set at 56.2 per cent of the average cost of educating a student in a government school (except for the ACT which is funded at 51.2 per cent).

The Act also provides for the introduction of a revised structure for some Commonwealth programs of targeted assistance to schools. It combines the literacy and numeracy grants and special education support grants into the Strategic Assistance for Improving Student Outcomes Programme. It combines the priority and community languages programs into the LOTE Programme.

## Schools Online Curriculum Content Initiative

At the tenth MCEETYA meeting in April 1999, ministers noted progress on the development of the Education and Training Sector Action Plan for the Information Economy. The Action Plan was developed in consultation with the Education Network Australia (EdNA) Reference Committee (ERC), which had been recognised by MCEETYA as the key policy forum on the educational use of ICT. The ERC included representatives from

schools, vocational education and training, and higher education.

The Plan contained separate plans for each sector and MCEETYA approved the School Education Action Plan for the Information Economy. The Plan identified three requirements for teachers and students to gain the maximum benefit from ICT in schools:

- Schools need computers and other infrastructure, and adequate bandwidth. Affordable bandwidth is a significant ongoing problem. The growing use of digital curriculum resources will increase the need for additional bandwidth in schools.
- Teachers need professional development on how to integrate ICT into their classrooms. Teachers see the scarcity of online curriculum content as a barrier to putting new skills into practice.
- Teachers and students require access to a comprehensive body of digital curriculum resources. These resources are needed to convert the investment in computers, bandwidth and teacher skills into improved learning outcomes.

In order to address the third of these issues, ministers recognised the need to increase the supply of quality digital curriculum resources with a uniquely Australian content that would:

- reinforce a sense of national identity among our young people
- ensure the relevance of the curricula of the Australian States and Territories and relevance to the lives of Australian students
- promote Australian standards and values
- advance Australian multiculturalism and Indigenous issues.

In order to move quickly and strategically on this, the Conference of Education Systems Chief Executive Officers (CESCEO) directed the Curriculum Corporation to coordinate the development of a fully costed business plan on generating online content for Australian schools in late 1999. The resulting report, *Delivering the Promise*, was distributed in January 2000 and, at their meeting in March, ministers put in place a mechanism to further this initiative. In doing so they approved a budget of \$13.65 million in the first year and between \$12.25 million and \$19.56 million in each of the next three years.

Since the eleventh MCEETYA meeting in March 2000, a significant amount of scoping, standards and research work has been undertaken by Curriculum Corporation and education.au limited. In addition, an Initiative website (<http://socci.edna.edu.au>) has operated since late December 2000. All documentation relating to the initiative is published on the website. Interested users can register to receive email alerts each time the website is updated.

A plan has been developed for online content development in 2001–06. This extensive Phase Two plan is available on the

Initiative website. It is the result of considerable discussion among curriculum and ICT advisory groups, and Chief Executive Officers. It outlines the major broad-level policy agreements reached on issues such as sharing of intellectual property, communication, governance, project management, budget, curriculum and technical approaches. The plan will be supplemented by the continuing detailed work plans of the joint venture.



# Part D

literacy, numeracy,  
indigenous education,  
science, the arts

australia's future depends  
each citizen having the need  
knowledge, understanding  
and values for a productive  
rewarding life in an educated  
just and open society





## Appendix 1

# Statistical annex

## Schools and students

### Population

**Table 1** Population by age group, Australia, selected years

Age	1986	1991	1997	1999	2000
0–4	1,208,485	1,271,703	1,292,230	1,273,589	1,263,136
5–14	2,491,033	2,513,827	2,628,106	2,646,610	2,658,127
15–19	1,347,222	1,364,074	1,294,551	1,330,972	1,348,751
20–29	2,685,176	2,796,427	2,826,836	2,828,198	2,836,191
30–39	2,535,899	2,754,122	2,904,763	2,912,608	2,918,768
40–49	1,856,604	2,323,416	2,671,143	2,745,749	2,787,893
50–59	1,492,387	1,572,884	1,946,832	2,120,953	2,203,532
60+	2,401,544	2,687,583	2,967,786	3,078,487	3,140,639
Total	16,018,350	17,284,036	18,532,247	18,937,166	19,157,037

Sources: ABS, Cat. No. 3101.0, *Australian Demographic Statistics*, December qtr 2000 and earlier publications

## Schools

**Table 2** Number of schools by category (and non-government affiliation) and level of education, by State, 2000

	Government	Non-government			All schools	
		Catholic	Independent	Total	Total	%
<b>New South Wales</b>						
Primary	1,648	425	110	535	2,183	22.8
Secondary	393	124	17	141	534	5.6
Combined prim/sec	64	32	160	192	256	2.7
Special	82	8	25	33	115	1.2
<b>Total</b>	<b>2,187</b>	<b>589</b>	<b>312</b>	<b>901</b>	<b>3,088</b>	<b>32.2</b>
<b>Victoria</b>						
Primary	1,236	386	63	449	1,685	17.6
Secondary	266	88	15	103	369	3.8
Combined prim/sec	48	11	118	129	177	1.8
Special	79	6	8	14	93	1.0
<b>Total</b>	<b>1,629</b>	<b>491</b>	<b>204</b>	<b>695</b>	<b>2,324</b>	<b>24.2</b>
<b>Queensland</b>						
Primary	985	191	44	235	1,220	12.7
Secondary	188	62	12	74	262	2.7
Combined prim/sec	75	17	93	110	185	1.9
Special	49	—	2	2	51	0.5
<b>Total</b>	<b>1,297</b>	<b>270</b>	<b>151</b>	<b>421</b>	<b>1,718</b>	<b>17.9</b>
<b>South Australia</b>						
Primary	452	74	45	119	571	6.0
Secondary	75	13	12	25	100	1.0
Combined prim/sec	74	19	33	52	126	1.3
Special	20	2	1	3	23	0.2
<b>Total</b>	<b>621</b>	<b>108</b>	<b>91</b>	<b>199</b>	<b>820</b>	<b>8.5</b>
<b>Western Australia</b>						
Primary	517	108	47	155	672	7.0
Secondary	95	28	10	38	133	1.4
Combined prim/sec	88	20	62	82	170	1.8
Special	66	1	1	2	68	0.7
<b>Total</b>	<b>766</b>	<b>157</b>	<b>120</b>	<b>277</b>	<b>1,043</b>	<b>10.9</b>
<b>Tasmania</b>						
Primary	142	25	8	33	175	1.8
Secondary	39	5	2	7	46	0.5
Combined prim/sec	26	7	19	26	52	0.5
Special	8	—	1	1	9	0.1
<b>Total</b>	<b>215</b>	<b>37</b>	<b>30</b>	<b>67</b>	<b>282</b>	<b>2.9</b>
<b>Northern Territory</b>						
Primary	91	6	9	15	106	1.1
Secondary	12	2	4	6	18	0.2
Combined prim/sec	42	7	4	11	53	0.6
Special	5	—	—	—	5	0.1
<b>Total</b>	<b>150</b>	<b>15</b>	<b>17</b>	<b>32</b>	<b>182</b>	<b>1.9</b>
<b>Australian Capital Territory</b>						
Primary	67	22	4	26	93	1.0
Secondary	22	5	1	6	28	0.3
Combined prim/sec	3	2	7	9	12	0.1
Special	4	—	1	1	5	0.1
<b>Total</b>	<b>96</b>	<b>29</b>	<b>13</b>	<b>42</b>	<b>138</b>	<b>1.4</b>
<b>Australia</b>						
Primary	5,138	1,237	330	1,567	6,705	69.9
Secondary	1,090	327	73	400	1,490	15.5
Combined prim/sec	420	115	496	611	1,031	10.7
Special	313	17	39	56	369	3.8
<b>Total all schools</b>						
<b>2000</b>	<b>6,961</b>	<b>1,696</b>	<b>938</b>	<b>2,634</b>	<b>9,595</b>	<b>100.0</b>
<b>1999</b>	<b>6,970</b>	<b>1,701</b>	<b>919</b>	<b>2,620</b>	<b>9,590</b>	
<b>1998</b>	<b>6,998</b>	<b>1,694</b>	<b>895</b>	<b>2,589</b>	<b>9,587</b>	

Note: Components may not add to totals due to rounding.

Source: ABS, Cat. No. 4221.0, *Schools Australia*, 2000

## Students

**Table 3** Proportion of full-time students enrolled in government and non-government schools by level of education<sup>(a)(b)</sup>, by State, selected years (per cent)

Level of education	Govt	1991 Cath.	Indep.	Govt	1996 Cath.	Indep.	Govt	2000 Cath.	Indep.
<b>New South Wales</b>									
Primary	74.1	20.5	5.4	73.9	19.7	6.4	72.5	19.6	7.9
Junior secondary	69.8	21.2	8.9	69.0	21.2	9.8	66.1	22.4	11.5
Senior secondary	66.9	21.9	11.1	64.7	23.2	12.1	63.0	23.9	13.0
Total secondary	69.0	21.4	9.5	67.9	21.7	10.4	65.3	22.8	11.9
<b>Total</b>	<b>72.0</b>	<b>20.9</b>	<b>7.2</b>	<b>71.3</b>	<b>20.5</b>	<b>8.1</b>	<b>69.4</b>	<b>21.0</b>	<b>9.6</b>
<b>Victoria</b>									
Primary	69.9	23.6	6.5	69.7	23.2	7.1	69.4	22.6	8.0
Junior secondary	65.3	21.2	13.5	63.4	22.0	14.6	62.2	22.1	15.7
Senior secondary	63.3	20.6	16.1	60.6	21.9	17.5	59.4	22.2	18.4
Total secondary	64.7	21.0	14.3	62.6	22.0	15.4	61.4	22.1	16.5
<b>Total</b>	<b>67.6</b>	<b>22.4</b>	<b>10.0</b>	<b>66.6</b>	<b>22.7</b>	<b>10.7</b>	<b>65.9</b>	<b>22.4</b>	<b>11.7</b>
<b>Queensland</b>									
Primary	78.7	16.1	5.2	77.2	15.7	7.1	76.0	15.5	8.5
Junior secondary	70.1	17.2	12.8	66.5	18.0	15.5	65.3	18.1	16.6
Senior secondary	67.8	18.3	13.9	63.4	19.1	17.5	62.5	19.5	18.1
Total secondary	69.2	17.6	13.2	65.5	18.4	16.1	64.3	18.6	17.2
<b>Total</b>	<b>75.0</b>	<b>16.7</b>	<b>8.3</b>	<b>72.6</b>	<b>16.8</b>	<b>10.7</b>	<b>71.4</b>	<b>16.7</b>	<b>11.9</b>
<b>South Australia</b>									
Primary	78.3	13.6	8.1	74.8	15.0	10.2	72.4	15.9	11.7
Junior secondary	72.1	15.2	12.6	68.6	17.0	14.4	67.1	17.4	15.5
Senior secondary	69.9	15.9	14.2	63.3	18.8	17.9	61.8	19.6	18.6
Total secondary	71.3	15.5	13.3	66.9	17.6	15.5	65.3	18.1	16.6
<b>Total</b>	<b>75.7</b>	<b>14.3</b>	<b>10.0</b>	<b>72.1</b>	<b>15.9</b>	<b>12.0</b>	<b>69.8</b>	<b>16.7</b>	<b>13.4</b>
<b>Western Australia</b>									
Primary	79.1	15.6	5.4	77.1	16.1	6.7	75.0	16.7	8.3
Junior secondary	70.6	18.0	11.4	67.7	18.5	13.8	65.5	18.9	15.6
Senior secondary	68.1	18.3	13.6	65.5	18.8	15.7	63.9	19.5	16.6
Total secondary	69.8	18.1	12.1	67.0	18.6	14.4	65.0	19.1	15.9
<b>Total</b>	<b>75.5</b>	<b>16.5</b>	<b>7.9</b>	<b>73.2</b>	<b>17.1</b>	<b>9.7</b>	<b>71.0</b>	<b>17.6</b>	<b>11.3</b>
<b>Tasmania</b>									
Primary	77.7	15.2	7.0	76.5	15.9	7.6	77.9	14.6	7.5
Junior secondary	74.5	14.4	11.1	72.6	15.5	11.9	71.2	16.5	12.3
Senior secondary	77.8	12.2	10.0	70.6	16.3	13.1	72.9	15.2	12.0
Total secondary	75.3	13.9	10.8	72.2	15.7	12.2	71.7	16.1	12.2
<b>Total</b>	<b>76.7</b>	<b>14.6</b>	<b>8.7</b>	<b>74.6</b>	<b>15.8</b>	<b>9.6</b>	<b>75.2</b>	<b>15.3</b>	<b>9.5</b>
<b>Northern Territory</b>									
Primary	82.4	13.5	4.1	80.5	14.0	5.5	80.1	13.7	6.2
Junior secondary	75.6	14.7	9.7	71.1	13.3	15.7	68.9	13.8	17.3
Senior secondary	85.7	8.2	6.1	77.9	9.9	12.2	76.5	11.8	11.7
Total secondary	78.6	12.8	8.6	72.7	12.5	14.8	70.9	13.3	15.8
<b>Total</b>	<b>81.2</b>	<b>13.3</b>	<b>5.5</b>	<b>78.2</b>	<b>13.5</b>	<b>8.3</b>	<b>77.4</b>	<b>13.6</b>	<b>9.1</b>
<b>Australian Capital Territory</b>									
Primary	68.3	26.1	5.6	68.1	26.0	5.9	66.3	26.9	6.8
Junior secondary	60.0	28.5	11.5	58.0	29.6	12.4	55.9	31.0	13.1
Senior secondary	71.4	19.8	8.8	69.4	20.7	9.9	69.6	20.8	9.6
Total secondary	63.8	25.6	10.6	61.7	26.7	11.6	60.3	27.7	11.9
<b>Total</b>	<b>66.2</b>	<b>25.8</b>	<b>7.9</b>	<b>65.1</b>	<b>26.3</b>	<b>8.5</b>	<b>63.5</b>	<b>27.3</b>	<b>9.2</b>
<b>Australia</b>									
Primary	74.9	19.2	5.9	74.0	18.9	7.1	72.8	18.8	8.4
Junior secondary	68.7	19.9	11.3	66.9	20.3	12.8	64.9	20.9	14.2
Senior secondary	66.9	19.6	13.4	63.7	21.0	15.3	62.5	21.4	16.1
Total secondary	68.3	19.8	12.0	66.0	20.5	13.5	64.2	21.1	14.8
<b>Total</b>	<b>72.1</b>	<b>19.5</b>	<b>8.4</b>	<b>70.7</b>	<b>19.6</b>	<b>9.7</b>	<b>69.2</b>	<b>19.8</b>	<b>11.0</b>

Note: Components may not add to totals due to rounding.

(a) As from 1990, students in special schools have been allocated to either primary or secondary education on the basis of age – primary if aged 12 or under and secondary if over 12.

(b) Junior secondary comprises years 7–10 in NSW, Vic., Tas. and ACT and years 8–10 in Qld, SA, WA and NT.

Sources: ABS, Cat. No. 4221.0, *Schools Australia*, 2000 and earlier related publications

**Table 4 Full-time students, by level of education<sup>(a)(b)</sup>, category of school and non-government affiliation, and gender, by State, 2000**

	Primary	Junior secondary <sup>(b)</sup>	Senior secondary yr 11–12	Total secondary	Total
<b>Government</b>					
New South Wales	455,914	226,581	77,128	303,709	759,623
Victoria	313,369	154,277	60,543	214,820	528,189
Queensland	278,190	99,745	52,467	152,212	430,402
South Australia	115,387	39,988	18,802	58,790	174,177
Western Australia	144,087	54,421	27,259	81,680	225,767
Tasmania	36,770	18,157	7,876	26,033	62,803
Northern Territory	20,947	5,735	2,243	7,978	28,925
Australian Capital Territory	21,409	10,632	6,360	16,992	38,401
<b>Australia</b>	<b>1,386,073</b>	<b>609,536</b>	<b>252,678</b>	<b>862,214</b>	<b>2,248,287</b>
Males	715,484	314,011	120,306	434,317	1,149,801
Females	670,589	295,525	132,372	427,897	1,098,486
<b>Catholic</b>					
New South Wales	123,318	76,953	29,296	106,249	229,567
Victoria	101,998	54,866	22,578	77,444	179,442
Queensland	56,665	27,573	16,349	43,922	100,587
South Australia	25,361	10,350	5,954	16,304	41,665
Western Australia	32,010	15,702	8,322	24,024	56,034
Tasmania	6,911	4,206	1,640	5,846	12,757
Northern Territory	3,586	1,148	346	1,494	5,080
Australian Capital Territory	8,688	5,906	1,905	7,811	16,499
<b>Australia</b>	<b>358,537</b>	<b>196,704</b>	<b>86,390</b>	<b>283,094</b>	<b>641,631</b>
Males	181,717	98,656	41,612	140,268	321,985
Females	176,820	98,048	44,778	142,826	319,646
<b>Independent</b>					
New South Wales	49,728	39,481	15,917	55,398	105,126
Victoria	36,353	38,918	18,793	57,711	94,064
Queensland	31,305	25,420	15,198	40,618	71,923
South Australia	18,598	9,257	5,662	14,919	33,517
Western Australia	15,950	12,952	7,058	20,010	35,960
Tasmania	3,539	3,144	1,294	4,438	7,977
Northern Territory	1,609	1,435	344	1,779	3,388
Australian Capital Territory	2,189	2,485	878	3,363	5,552
<b>Australia</b>	<b>159,271</b>	<b>133,092</b>	<b>65,144</b>	<b>198,236</b>	<b>357,507</b>
Males	80,513	67,027	31,714	98,741	179,254
Females	78,758	66,065	33,430	99,495	178,253
<b>Total non-government</b>					
New South Wales	173,046	116,434	45,213	161,647	334,693
Victoria	138,351	93,784	41,371	135,155	273,506
Queensland	87,970	52,993	31,547	84,540	172,510
South Australia	43,959	19,607	11,616	31,223	75,182
Western Australia	47,960	28,654	15,380	44,034	91,994
Tasmania	10,450	7,350	2,934	10,284	20,734
Northern Territory	5,195	2,583	690	3,273	8,468
Australian Capital Territory	10,877	8,391	2,783	11,174	22,051
<b>Australia</b>	<b>517,808</b>	<b>329,796</b>	<b>151,534</b>	<b>481,330</b>	<b>999,138</b>
Males	262,230	165,683	73,326	239,009	501,239
Females	255,578	164,113	78,208	242,321	497,899
<b>All schools</b>					
New South Wales	628,960	343,015	122,341	465,356	1,094,316
Victoria	451,720	248,061	101,914	349,975	801,695
Queensland	366,160	152,738	84,014	236,752	602,912
South Australia	159,346	59,595	30,418	90,013	249,359
Western Australia	192,047	83,075	42,639	125,714	317,761
Tasmania	47,220	25,507	10,810	36,317	83,537
Northern Territory	26,142	8,318	2,933	11,251	37,393
Australian Capital Territory	32,286	19,023	9,143	28,166	60,452
<b>Australia</b>	<b>1,903,881</b>	<b>939,332</b>	<b>404,212</b>	<b>1,343,544</b>	<b>3,247,425</b>
Males	977,714	479,694	193,632	673,326	1,651,040
Females	926,167	459,638	210,580	670,218	1,596,385

(a) As from 1990, students in special schools have been allocated to either primary or secondary education on the basis of age – primary if aged 12 or under and secondary if over 12.

(b) Junior secondary comprises years 7–10 in NSW, Vic., Tas. and ACT and years 8–10 in Qld, SA, WA and NT.

Source: ABS, Cat. No. 4221.0, *Schools Australia*, 2000

**Table 5 Full-time primary<sup>(a)</sup> Indigenous students, by year of education and category of school, by State, 2000**

	Pre Yr 1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Ungraded.	Total
<b>New South Wales</b>										
Government	2,965	2,752	2,818	2,628	2,547	2,495	2,439	n.a.	662	19,306
Non-government	311	280	305	284	263	270	211	n.a.	5	1,929
<b>All schools</b>	<b>3,276</b>	<b>3,032</b>	<b>3,123</b>	<b>2,912</b>	<b>2,810</b>	<b>2,765</b>	<b>2,650</b>	<b>n.a.</b>	<b>667</b>	<b>21,235</b>
<b>Victoria</b>										
Government	569	505	547	533	533	480	473	n.a.	47	3,687
Non-government	39	36	47	38	34	31	34	n.a.	3	262
<b>All schools</b>	<b>608</b>	<b>541</b>	<b>594</b>	<b>571</b>	<b>567</b>	<b>511</b>	<b>507</b>	<b>n.a.</b>	<b>50</b>	<b>3,949</b>
<b>Queensland</b>										
Government	n.a.	2,958	2,831	2,935	2,781	2,745	2,551	2,353	161	19,315
Non-government	n.a.	308	318	294	247	264	256	226	2	1,915
<b>All schools</b>	<b>n.a.</b>	<b>3,266</b>	<b>3,149</b>	<b>3,229</b>	<b>3,028</b>	<b>3,009</b>	<b>2,807</b>	<b>2,579</b>	<b>163</b>	<b>21,230</b>
<b>South Australia</b>										
Government	671	487	568	571	524	528	496	483	79	4,407
Non-government	49	55	43	50	49	52	48	35	1	382
<b>All schools</b>	<b>720</b>	<b>542</b>	<b>611</b>	<b>621</b>	<b>573</b>	<b>580</b>	<b>544</b>	<b>518</b>	<b>80</b>	<b>4,789</b>
<b>Western Australia</b>										
Government	n.a.	1,570	1,457	1,530	1,453	1,471	1,350	1,372	0	10,203
Non-government	n.a.	242	231	247	247	280	248	255	256	2,006
<b>All schools</b>	<b>n.a.</b>	<b>1,812</b>	<b>1,688</b>	<b>1,777</b>	<b>1,700</b>	<b>1,751</b>	<b>1,598</b>	<b>1,627</b>	<b>256</b>	<b>12,209</b>
<b>Tasmania</b>										
Government	330	352	347	352	381	331	364	n.a.	0	2,457
Non-government	32	37	43	41	46	41	48	n.a.	1	289
<b>All schools</b>	<b>362</b>	<b>389</b>	<b>390</b>	<b>393</b>	<b>427</b>	<b>372</b>	<b>412</b>	<b>n.a.</b>	<b>1</b>	<b>2,746</b>
<b>Northern Territory</b>										
Government	1,344	1,291	1,213	1,145	1,074	974	848	772	101	8,762
Non-government	166	177	152	128	141	178	130	117	29	1,218
<b>All schools</b>	<b>1,510</b>	<b>1,468</b>	<b>1,365</b>	<b>1,273</b>	<b>1,215</b>	<b>1,152</b>	<b>978</b>	<b>889</b>	<b>130</b>	<b>9,980</b>
<b>Australian Capital Territory</b>										
Government	84	71	64	69	75	51	51	n.a.	1	466
Non-government	10	12	15	12	11	16	8	n.a.	0	84
<b>All schools</b>	<b>94</b>	<b>83</b>	<b>79</b>	<b>81</b>	<b>86</b>	<b>67</b>	<b>59</b>	<b>n.a.</b>	<b>1</b>	<b>550</b>
<b>Australia</b>										
Government	5,963	9,986	9,845	9,763	9,368	9,075	8,572	4,980	1,051	68,603
Non-government	607	1,147	1,154	1,094	1,038	1,132	983	633	297	8,085
<b>All schools</b>	<b>6,570</b>	<b>11,133</b>	<b>10,999</b>	<b>10,857</b>	<b>10,406</b>	<b>10,207</b>	<b>9,555</b>	<b>5,613</b>	<b>1,348</b>	<b>76,688</b>

n.a. not applicable.

(a) As from 1990, students in special schools have been allocated to either primary or secondary education on the basis of age – primary if 12 years of age or under and secondary if over 12.

Source: MCEETYA, *National Schools Statistics Collection*, 2000



**Table 6 Full-time secondary<sup>(a)</sup> and total Indigenous students, by year of education and category of school, by State, 2000**

	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Ungraded	Total	Total primary & secondary
<b>New South Wales</b>									
Government	2,302	2,217	1,954	1,551	803	556	717	10,100	29,406
Non-government	245	210	202	167	92	83	20	1,019	2,948
<b>All schools</b>	<b>2,547</b>	<b>2,427</b>	<b>2,156</b>	<b>1,718</b>	<b>895</b>	<b>639</b>	<b>737</b>	<b>11,119</b>	<b>32,354</b>
<b>Victoria</b>									
Government	399	379	352	293	180	87	46	1,736	5,423
Non-government	50	33	45	30	23	19	4	204	466
<b>All schools</b>	<b>449</b>	<b>412</b>	<b>397</b>	<b>323</b>	<b>203</b>	<b>106</b>	<b>50</b>	<b>1,940</b>	<b>5,889</b>
<b>Queensland</b>									
Government	n.a.	1,888	1,889	1,647	1,113	850	234	7,621	26,936
Non-government	n.a.	448	402	455	299	260	12	1,876	3,791
<b>All schools</b>	<b>n.a.</b>	<b>2,336</b>	<b>2,291</b>	<b>2,102</b>	<b>1,412</b>	<b>1,110</b>	<b>246</b>	<b>9,497</b>	<b>30,727</b>
<b>South Australia</b>									
Government	n.a.	478	382	350	203	90	53	1,556	5,963
Non-government	n.a.	50	44	31	17	15	2	159	541
<b>All schools</b>	<b>n.a.</b>	<b>528</b>	<b>426</b>	<b>381</b>	<b>220</b>	<b>105</b>	<b>55</b>	<b>1,715</b>	<b>6,504</b>
<b>Western Australia</b>									
Government	n.a.	1,217	1,103	988	468	230	7	4,013	14,216
Non-government	n.a.	210	242	184	177	57	135	1,005	3,011
<b>All schools</b>	<b>n.a.</b>	<b>1,427</b>	<b>1,345</b>	<b>1,172</b>	<b>645</b>	<b>287</b>	<b>142</b>	<b>5,018</b>	<b>17,227</b>
<b>Tasmania</b>									
Government	302	270	334	331	204	133	0	1,574	4,031
Non-government	43	38	51	31	26	16	0	205	494
<b>All schools</b>	<b>345</b>	<b>308</b>	<b>385</b>	<b>362</b>	<b>230</b>	<b>149</b>	<b>0</b>	<b>1,779</b>	<b>4,525</b>
<b>Northern Territory</b>									
Government	n.a.	357	266	223	193	82	1,133	2,254	11,016
Non-government	n.a.	263	116	86	98	29	591	1,183	2,401
<b>All schools</b>	<b>n.a.</b>	<b>620</b>	<b>382</b>	<b>309</b>	<b>291</b>	<b>111</b>	<b>1,724</b>	<b>3,437</b>	<b>13,417</b>
<b>Australian Capital Territory</b>									
Government	51	54	52	45	24	28	0	254	720
Non-government	17	18	18	7	12	7	1	80	164
<b>All schools</b>	<b>68</b>	<b>72</b>	<b>70</b>	<b>52</b>	<b>36</b>	<b>35</b>	<b>1</b>	<b>334</b>	<b>884</b>
<b>Australia</b>									
Government	3,054	6,860	6,332	5,428	3,188	2,056	2,190	29,108	97,711
Non-government	355	1,270	1,120	991	744	486	765	5,731	13,816
<b>All schools</b>	<b>3,409</b>	<b>8,130</b>	<b>7,452</b>	<b>6,419</b>	<b>3,932</b>	<b>2,542</b>	<b>2,955</b>	<b>34,839</b>	<b>111,527</b>

n.a. not applicable.

(a) As from 1990, students in special schools have been allocated to either primary or secondary education on the basis of age – primary if 12 years of age or under and secondary if over 12.

Source: MCEETYA, *National Schools Statistics Collection*, 2000

**Table 7** Number of full-time students, actual and projected<sup>(a)</sup> by level of education and category of school, Australia, selected years ('000 as at July each year)

	Primary <sup>(b, c)</sup>			Secondary <sup>(c)</sup>			Total		
	Govt	Non-govt	Total <sup>(d)</sup>	Govt	Non-govt	Total <sup>(d)</sup>	Govt	Non-govt	Total <sup>(d)</sup>
1981	1,485	386	1,871	814	302	1,116	2,299	688	2,987
1986	1,290	410	1,700	918	384	1,301	2,208	794	3,001
1990	1,323	441	1,763	871	407	1,278	2,193	848	3,042
1991	1,339	448	1,787	879	410	1,289	2,217	858	3,075
1992	1,352	453	1,804	882	412	1,295	2,234	865	3,099
1993	1,359	457	1,816	869	414	1,282	2,228	870	3,098
1994	1,361	465	1,826	854	419	1,274	2,215	884	3,099
1995	1,361	472	1,834	847	429	1,276	2,208	901	3,109
1996	1,367	481	1,848	854	441	1,295	2,222	921	3,143
1997	1,367	489	1,856	863	453	1,316	2,230	942	3,172
1998	1,372	497	1,870	867	462	1,329	2,239	959	3,199
1999	1,379	506	1,885	869	472	1,341	2,248	979	3,227
<b>2000</b>	<b>1,386</b>	<b>518</b>	<b>1,904</b>	<b>862</b>	<b>481</b>	<b>1,344</b>	<b>2,248</b>	<b>999</b>	<b>3,247</b>
2001	1,388	526	1,914	858	491	1,348	2,246	1,016	3,262
2002	1,390	532	1,922	856	502	1,358	2,246	1,034	3,280
2003	1,387	536	1,923	860	514	1,374	2,247	1,051	3,297
2004	1,382	539	1,921	863	526	1,389	2,245	1,065	3,310
2005	1,374	539	1,914	871	539	1,409	2,245	1,078	3,323
2006	1,367	538	1,906	876	551	1,426	2,243	1,089	3,332
2007	1,360	535	1,895	878	561	1,439	2,238	1,096	3,335
2008	1,354	533	1,886	878	569	1,446	2,231	1,101	3,332
2009	1,346	529	1,875	876	574	1,449	2,221	1,103	3,324
2010	1,337	526	1,862	874	578	1,452	2,211	1,103	3,314

(a) Figures for 2001 and beyond are projections based on 1999 and 2000 actual enrolments and the maintenance of 1999–2000 grade progression ratios. They will not reflect such factors as the effects of future changes in education and immigration policy, Government policy, and social and economic conditions.

(b) Prior to 1984 ungraded students were classified as primary students.

(c) From 1984 students in special schools have been allocated to either primary or secondary education.

(d) Components may not add to totals due to rounding.

Source: Commonwealth DETYA

**Table 8 Part-time students, by level of education<sup>(a)(b)</sup>, category of school, and gender, by State, 2000**

	Primary	Junior secondary <sup>(b)(c)</sup>	Senior secondary yr 11–12	Total secondary	Total
<b>Government</b>					
New South Wales	0	4	3,634	3,638	3,638
Victoria	449	415	2,074	2,489	2,938
Queensland	538	1,573	2,295	3,868	4,406
South Australia	50	1,743	5,272	7,015	7,065
Western Australia	0	2,931	1,223	4,154	4,154
Tasmania	7	29	3,509	3,538	3,545
Northern Territory	0	422	555	977	977
Australian Capital Territory	58	1	6	7	65
Australia	1,102	7,118	18,568	25,686	26,788
Males	763	2,701	7,092	9,793	10,556
Females	339	4,417	11,476	15,893	16,232
<b>Non-government</b>					
New South Wales	170	78	192	270	440
Victoria	307	96	89	185	492
Queensland	167	11	28	39	206
South Australia	89	16	245	261	350
Western Australia	36	0	7	7	43
Tasmania	60	91	30	121	181
Northern Territory	27	4	13	17	44
Australian Capital Territory	112	4	0	4	116
Australia	968	300	604	904	1,872
Males	540	159	228	387	927
Females	428	141	376	517	945
<b>All schools</b>					
New South Wales	170	82	3,826	3,908	4,078
Victoria	756	511	2,163	2,674	3,430
Queensland	705	1,584	2,323	3,907	4,612
South Australia	139	1,759	5,517	7,276	7,415
Western Australia	36	2,931	1,230	4,161	4,197
Tasmania	67	120	3,539	3,659	3,726
Northern Territory	27	426	568	994	1,021
Australian Capital Territory	170	5	6	11	181
<b>Australia</b>	<b>2,070</b>	<b>7,418</b>	<b>19,172</b>	<b>26,590</b>	<b>28,660</b>
<b>Males</b>	<b>1,303</b>	<b>2,860</b>	<b>7,320</b>	<b>10,180</b>	<b>11,483</b>
<b>Females</b>	<b>767</b>	<b>4,558</b>	<b>11,852</b>	<b>16,410</b>	<b>17,177</b>

(a) As from 1990, students in special schools have been allocated to either primary or secondary education on the basis of age – primary if aged 12 or under and secondary if over 12.

(b) Junior secondary comprises years 7–10 in NSW, Vic., Tas. and ACT and years 8–10 in Qld, SA, WA and NT.

(c) Includes ungraded secondary.

Source: ABS, Cat. No. 4221.0, *Schools Australia*, 2000

**Table 9 Full-time year 12 students by gender and category of school, by State, selected years**

State/category	1991			1997			2000		
	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons
<b>New South Wales</b>									
Government	16,305	18,515	34,820	15,791	18,017	33,808	16,008	19,102	35,110
Non-government	8,869	9,620	18,489	9,554	10,170	19,724	10,412	11,322	21,734
<b>All schools</b>	<b>25,174</b>	<b>28,135</b>	<b>53,309</b>	<b>25,345</b>	<b>28,187</b>	<b>53,532</b>	<b>26,420</b>	<b>30,424</b>	<b>56,844</b>
<b>Victoria</b>									
Government	14,741	16,675	31,416	12,231	14,534	26,765	12,217	14,639	26,856
Non-government	8,756	10,460	19,216	8,939	9,782	18,721	9,290	10,357	19,647
<b>All schools</b>	<b>23,497</b>	<b>27,135</b>	<b>50,632</b>	<b>21,170</b>	<b>24,316</b>	<b>45,486</b>	<b>21,507</b>	<b>24,996</b>	<b>46,503</b>
<b>Queensland</b>									
Government	11,606	12,658	24,264	10,184	11,377	21,561	11,725	12,889	24,614
Non-government	5,848	5,850	11,698	6,541	6,574	13,115	7,483	7,727	15,210
<b>All schools</b>	<b>17,454</b>	<b>18,508</b>	<b>35,962</b>	<b>16,725</b>	<b>17,951</b>	<b>34,676</b>	<b>19,208</b>	<b>20,616</b>	<b>39,824</b>
<b>South Australia</b>									
Government	5,718	5,758	11,476	3,322	3,738	7,060	3,540	4,059	7,599
Non-government	2,554	2,726	5,280	2,236	2,517	4,753	2,467	2,906	5,373
<b>All schools</b>	<b>8,272</b>	<b>8,484</b>	<b>16,756</b>	<b>5,558</b>	<b>6,255</b>	<b>11,813</b>	<b>6,007</b>	<b>6,965</b>	<b>12,972</b>
<b>Western Australia</b>									
Government	5,420	5,791	11,211	5,327	6,136	11,463	5,717	6,332	12,049
Non-government	2,589	2,869	5,458	2,967	3,349	6,316	3,391	3,741	7,132
<b>All schools</b>	<b>8,009</b>	<b>8,660</b>	<b>16,669</b>	<b>8,294</b>	<b>9,485</b>	<b>17,779</b>	<b>9,108</b>	<b>10,073</b>	<b>19,181</b>
<b>Tasmania</b>									
Government	1,475	1,536	3,011	1,389	1,432	2,821	1,643	1,961	3,604
Non-government	451	476	927	549	680	1,229	645	712	1,357
<b>All schools</b>	<b>1,926</b>	<b>2,012</b>	<b>3,938</b>	<b>1,938</b>	<b>2,112</b>	<b>4,050</b>	<b>2,288</b>	<b>2,673</b>	<b>4,961</b>
<b>Northern Territory</b>									
Government	636	604	1,240	414	482	896	405	533	938
Total non-govt	74	80	154	94	136	230	108	141	249
<b>All schools</b>	<b>710</b>	<b>684</b>	<b>1,394</b>	<b>508</b>	<b>618</b>	<b>1,126</b>	<b>513</b>	<b>674</b>	<b>1,187</b>
<b>Australian Capital Territory</b>									
Government	1,634	1,606	3,240	1,496	1,438	2,934	1,479	1,556	3,035
Non-government	722	635	1,357	689	687	1,376	688	615	1,303
<b>All schools</b>	<b>2,356</b>	<b>2,241</b>	<b>4,597</b>	<b>2,185</b>	<b>2,125</b>	<b>4,310</b>	<b>2,167</b>	<b>2,171</b>	<b>4,338</b>
<b>Australia</b>									
Government	57,535	63,143	120,678	50,154	57,154	107,308	52,734	61,071	113,805
Non-government	29,863	32,716	62,579	31,569	33,895	65,464	34,484	37,521	72,005
<b>All schools</b>	<b>87,398</b>	<b>95,859</b>	<b>183,257</b>	<b>81,723</b>	<b>91,049</b>	<b>172,772</b>	<b>87,218</b>	<b>98,592</b>	<b>185,810</b>

Sources: ABS, Cat. No. 4221.0, *Schools Australia*, 2000 and earlier publications

**Table 10 Year 12 subject enrolments in tertiary-accredited subjects, by key learning area, by gender, Australia, 2000**

Key learning area	Subject enrolments		
	Males	Females	Total
English	76,173	94,371	170,544
Mathematics	81,167	81,321	162,488
Society and environment	88,454	113,726	202,180
Science	68,357	78,245	146,602
Arts	24,141	45,512	69,653
LOTE	8,131	16,431	24,562
Technology	50,159	34,605	84,764
Health and physical education	17,874	22,109	39,983
<b>Total subject enrolments</b>	<b>414,456</b>	<b>486,320</b>	<b>900,776<sup>(a)</sup></b>
<b>Total year 12 students</b>	<b>87,218</b>	<b>98,592</b>	<b>185,810</b>

(a) Total enrolments for 2000 are higher than for the previous year due to substantial growth in the subject enrolments in Queensland.

Sources: DETYA, derived from data supplied by State secondary accreditation authorities; ABS, Cat. No. 4221.0, *Schools Australia*, 2000

**Table 11 Year 12 school leavers<sup>(a)</sup> commencing a course at Bachelor level or below<sup>(b)</sup>, by gender, Australia, 1991–2000**

Year	Males	Females	Persons	Percentage change on preceding year	Females %	School leavers as a proportion of total Bachelor level or below %
1991	29,709	37,600	67,309	0.5	55.9	42.7
1992	26,930	34,082	61,012	-9.4	55.9	42.0
1993	27,704	35,579	63,283	3.7	56.2	43.0
1994	28,560	36,689	65,249	3.1	56.2	42.6
1995	29,156	37,757	66,913	2.6	56.4	40.5
1996	29,552	38,726	68,278	2.0	56.7	39.2
1997	29,251	38,202	67,453	-1.2	56.6	38.9
1998	29,481	39,370	68,851	2.1	57.2	39.7
1999	29,761	40,247	70,008	1.7	57.5	39.8
2000	28,749	39,405	68,154	-2.6	57.8	38.5

(a) School leaver commencers with no prior qualifications higher than year 12 or equivalent.

(b) Includes Bachelor's graduate entry, Bachelor's honours, Bachelor's pass, associate degree, advanced diploma (AQF), diploma (AQF), other award course, enabling course, or non-award course.

Note: This table is not comparable with tables published in previous National Reports. Overseas students enrolling or graduating from teacher education courses are no longer included in this table. It is expected that these students will return to their country of origin following completion of their studies.

Source: DETYA

**Table 12 Year 12 school leavers<sup>(a)</sup> commencing a course at Bachelor level or below<sup>(b)</sup>, by gender and broad field of study<sup>(c)</sup>, Australia, 2000**

Broad field of study	Males		Females		Persons	
	Number	%	Number	%	Number	%
Arts	5,423	18.9	14,213	36.1	19,636	28.8
Business	7,925	27.6	8,292	21.0	16,217	23.8
Education	1,157	4.0	5,124	13.0	6,281	9.2
Engineering	6,734	23.4	1,350	3.4	8,084	11.9
Health	1,634	5.7	6,064	15.4	7,698	11.3
Science	7,984	27.8	6,835	17.3	14,819	21.7
Other <sup>(d)</sup>	2,718	9.5	3,550	9.0	6,268	9.2
<b>Total</b>	<b>28,749</b>	<b>100.0</b>	<b>39,405</b>	<b>100.0</b>	<b>68,154</b>	<b>100.0</b>

(a) School leaver commencers with no prior qualifications higher than year 12 or equivalent.

(b) Includes Bachelor's graduate entry, Bachelor's honours, Bachelor's pass, associate degree, advanced diploma (AQF), diploma (AQF), other award course, enabling course, or non-award course.

(c) The data take into account the coding of combined courses to two fields of study.

(d) Includes agriculture, animal husbandry, architecture, building, law, legal studies, veterinary science and non-award courses.

Note: This table is not comparable with tables published in previous National Reports. Overseas students enrolling or graduating from teacher education courses will no longer be included in this table. It is expected that these students will return to their country of origin following completion of their studies.

Source: DETYA



**Table 13 Destinations of students aged 15–19 years who completed school in 1999, by labour force status/tertiary institution attended in 2000, by State (per cent)**

Labour force status/ educational institution	NSW	Vic.	QLD	SA	WA	Tas.	NT	ACT	Australia
Employed	30	26	28	38	29	*	*	*	29
Unemployed	*	10	11	*	8	*	*	*	9
Higher education institution	26	33	32	27	25	*	*	*	29
TAFE	23	24	20	*	26	*	*	*	23
Other <sup>(a)</sup>	14	*	9	*	12	*	*	*	10
Total <sup>(b)</sup>	100	100	100	100	100	100	100	100	100
Number of students	96,341	76,370	60,512	17,580	31,596	6,817	2,512	5,423	297,150

(a) Includes persons not in labour force or attending business colleges, industry skills centres and other educational institutions.

(b) Since figures have been rounded, discrepancies may occur between the sums of component items and totals.

\* Estimate too small for most practical purposes. Cut-off points are: NSW 7,072; Vic. 5,777; Qld 5,201; SA 3,594; WA 3,710; Tas. 2,442; NT 3,128; ACT 2,627; Australia 5,413

Source: ABS, *Labour Force Survey* (unpublished data)

**Table 14** Destinations of 15–19-year-old students in year following completion of year 12, by gender, school sector, labour force status/type of tertiary institution attended, Australia, 2000 (per cent)

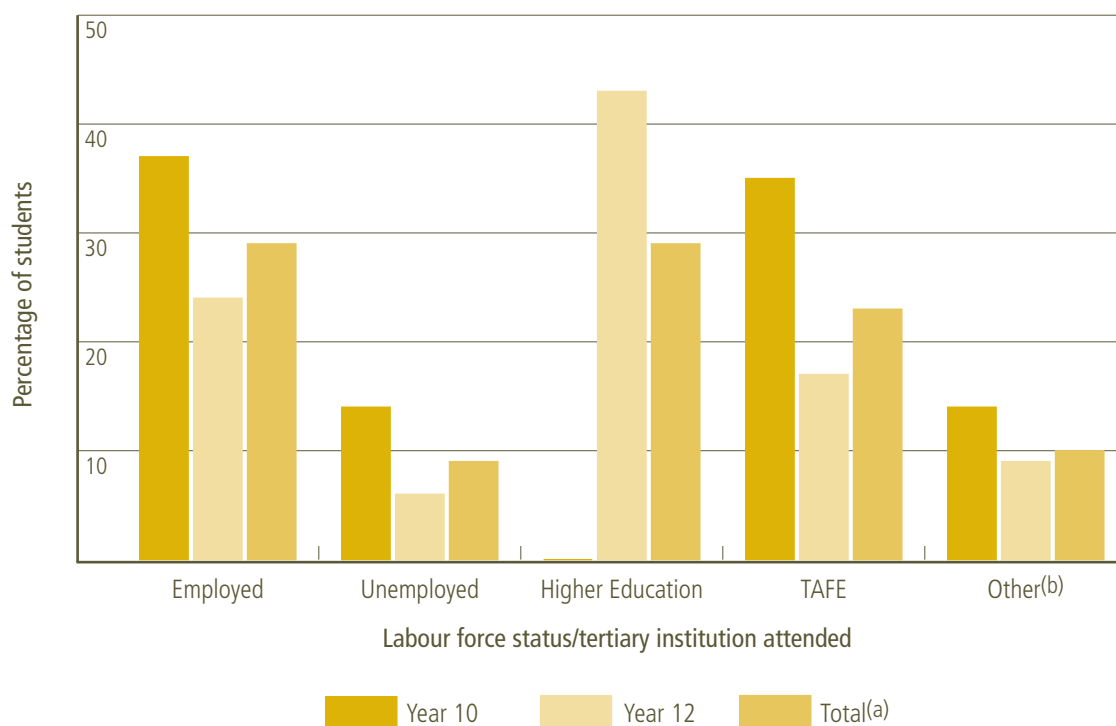
Labour force status/ educational institution attended in 2000	Government			Non-government			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Employed	33	23	27	17	21	19	27	22	24
Unemployed	6	11	9	3	2	3	5	8	6
Higher education	32	38	35	57	56	56	41	45	43
TAFE	22	18	20	15	11	13	20	15	17
Other <sup>(a)</sup>	7	10	9	9	10	9	8	10	9
Total <sup>(b)</sup>	100	100	100	100	100	100	100	100	100
Number of students	57,812	66,404	124,218	34,277	38,172	72,449	92,090	104,577	196,667

(a) Includes persons not in labour force or attending business colleges, industry skills centres and other educational institutions.

(b) Since figures have been rounded, discrepancies may occur between the sums of component items and totals.

Source: ABS, *Labour Force Survey* (unpublished data)

**Figure 1** Destinations of 15–19-year-old students who completed school in 1999, by labour force status/tertiary institution attended in 2000, Australia (per cent)



(a) Includes persons whose highest level of completed schooling was other than years 10 and 12.

(b) Includes persons not in labour force or attending business colleges, industry skills centres and other educational institutions.

Source: ABS, *Labour Force Survey* (unpublished data)

**Table 15 Destinations of 15–19-year-old school leavers, in the year following completion of year 12, by labour force status/tertiary institution attended, 1993–2000, Australia (per cent)**

Labour force status/ educational institution	1993	1994	1995	1996	1997	1998	1999	2000
Employed	22	20	20	23	24	21	22	24
Unemployed	10	10	9	7	7	6	5	6
Higher education institution	34	39	40	45	41	46	47	43
TAFE	26	23	26	21	20	18	19	17
Other <sup>(a)</sup>	8	8	4	4	9	8	8	9
Total <sup>(b)</sup>	100	100	100	100	100	100	100	100
Number of students	170,255	176,196	168,772	166,025	165,964	158,642	186,409	196,667

(a) 'Other' includes persons not in labour force or students attending business colleges, industry skills centres and other educational institutions.

(b) Since figures have been rounded, discrepancies may occur between the sums of component items and totals.

Source: ABS, *Labour Force Survey* (unpublished data)

**Table 16** Number of students aged 15–19 years who completed school in 1999 and attended TAFE in 2000, by sector, Australia

Year 12	
Government	24,887
Non-government	9,340
Total	34,227
Years 10 and 11	
Government	19,896
Non-government	8,469
Total	28,365
Total <sup>(a)</sup>	
Government	48,812
Non-government	18,065
Total	66,878

a) Includes a small number of persons who completed a year other than years 10, 11 or 12.

Source: ABS, *Labour Force Survey* (unpublished data)

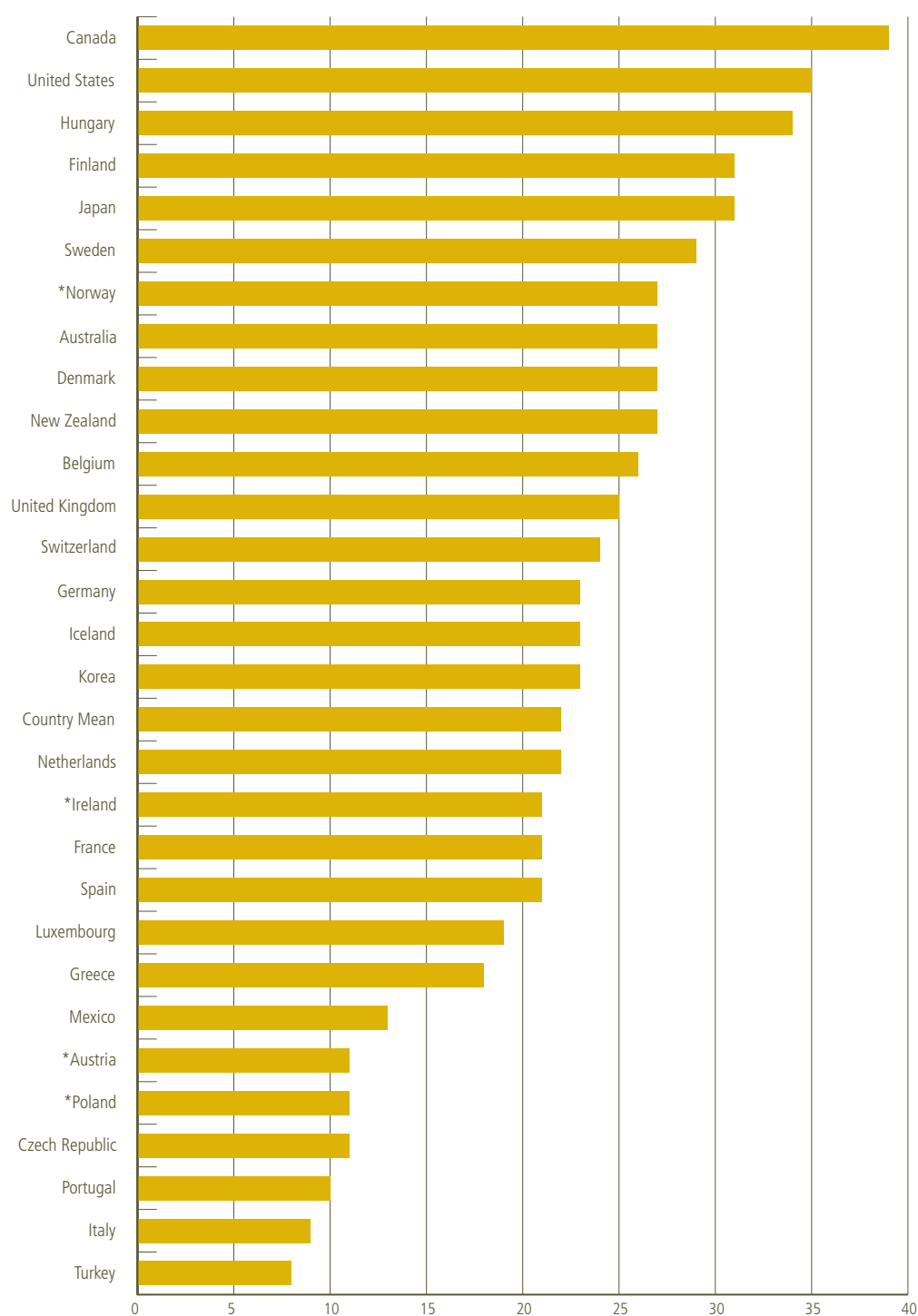
**Table 17** Year 12 enrolments in tertiary-accredited LOTE, by languages, all schools, Australia, 1994–2000 (per cent)

Language	1994	1995	1996	1997	1998	1999	2000
Japanese	20	21	22	21	22	22	22
French	17	18	17	16	17	17	17
German	10	11	11	11	11	11	11
Chinese	11	10	10	10	10	11	12
Italian	9	9	9	9	8	8	8
Indonesian	5	6	7	8	8	8	9
Greek	7	6	5	5	4	4	4
Vietnamese	5	5	4	4	3	3	3
Spanish	4	3	3	3	3	3	3
Arabic	3	2	2	2	2	2	2
Other	9	9	10	11	11	12	11
Total	100	100	100	100	100	100	100

Note: Where figures have been rounded, discrepancies may exist between totals and the sums of component parts.

Source: DETYA, derived from data supplied by State accreditation authorities

**Figure 2 Educational attainment of the population in OECD countries<sup>(a)</sup>, 1999**



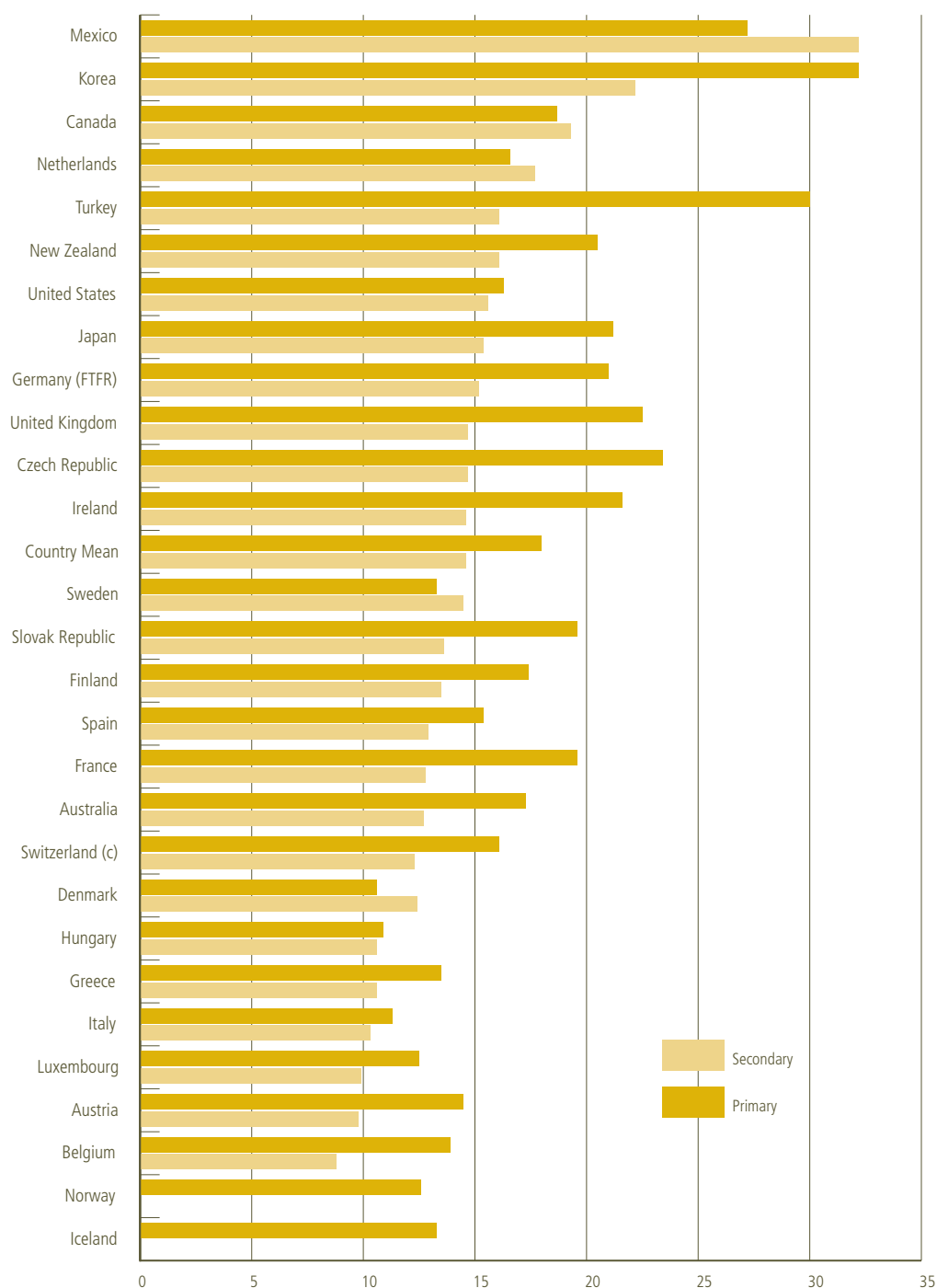
(a) Percentage of the population 25–64 years of age that has completed tertiary education.

\* 1998 data.

Source: OECD, *Education at a Glance*, 2001, Table A2.1a



**Figure 3 Ratio of primary and secondary students to teaching staff, government and non-government education, OECD countries<sup>(a)(b)</sup>, 1999**



(a) Some countries did not provide information for the table.

(b) Some countries may have also included vocational education.

Source: OECD, *Education at a Glance*, 2001, Table D5.1

# Teachers and teaching

## Staff

**Table 18 FTE<sup>(a)</sup> of school staff, by area of activity, gender, category of school and major function, Australia, 2000**

Major function	Primary			Secondary			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Government									
Teaching	17,844	63,292	81,137	31,802	37,672	69,474	49,646	100,964	150,610
Specialist support	550	2,375	2,925	979	1,685	2,664	1,528	4,060	5,588
Administrative & clerical (including teacher aides)	962	19,743	20,706	1,333	13,485	14,818	2,296	33,228	35,524
Building operations, general maintenance & other	2,091	233	2,324	1,493	151	1,644	3,584	385	3,969
<b>Total</b>	<b>21,448</b>	<b>85,643</b>	<b>107,091</b>	<b>35,607</b>	<b>52,993</b>	<b>88,600</b>	<b>57,055</b>	<b>138,636</b>	<b>195,690</b>
Catholic									
Teaching	3,471	15,291	18,763	9,227	11,880	21,107	12,698	27,172	39,869
Specialist support	23	172	194	169	372	541	192	544	736
Administrative & clerical (including teacher aides)	130	3,733	3,863	732	3,807	4,539	862	7,539	8,401
Building operations, general maintenance & other	326	183	510	931	315	1,246	1,257	499	1,756
<b>Total</b>	<b>3,950</b>	<b>19,379</b>	<b>23,329</b>	<b>11,059</b>	<b>16,374</b>	<b>27,433</b>	<b>15,009</b>	<b>35,753</b>	<b>50,762</b>
Independent									
Teaching	2,562	7,617	10,178	8,236	9,157	17,392	10,798	16,772	27,571
Specialist support	53	247	301	180	322	502	232	570	802
Administrative & clerical (including teacher aides)	418	2,542	2,960	1,015	3,488	4,503	1,433	6,031	7,464
Building operations, general maintenance & other	624	136	759	1,187	244	1,431	1,811	379	2,190
<b>Total</b>	<b>3,657</b>	<b>10,542</b>	<b>14,199</b>	<b>10,617</b>	<b>13,211</b>	<b>23,827</b>	<b>14,274</b>	<b>23,753</b>	<b>38,026</b>
Non-government									
Teaching	6,033	22,908	28,941	17,463	21,037	38,499	23,496	43,944	67,440
Specialist support	76	419	495	349	694	1,043	424	1,114	1,538
Administrative & clerical (including teacher aides)	548	6,275	6,823	1,747	7,295	9,042	2,295	13,570	15,865
Building operations, general maintenance & other	950	319	1,269	2,118	559	2,677	3,068	878	3,946
<b>Total</b>	<b>7,607</b>	<b>29,921</b>	<b>37,528</b>	<b>21,676</b>	<b>29,585</b>	<b>51,260</b>	<b>29,283</b>	<b>59,506</b>	<b>88,788</b>
All schools									
Teaching	23,878	86,200	110,077	49,265	58,708	107,973	73,142	144,908	218,050
Specialist support	625	2,794	3,420	1,327	2,379	3,706	1,953	5,173	7,126
Administrative & clerical (including teacher aides)	1,511	26,018	27,529	3,080	20,780	23,860	4,591	46,798	51,388
Building operations, general maintenance & other	3,041	552	3,593	3,611	710	4,321	6,652	1,263	7,914
<b>Total</b>	<b>2000</b>	<b>29,055</b>	<b>115,564</b>	<b>144,619</b>	<b>57,283</b>	<b>82,577</b>	<b>139,860</b>	<b>86,337</b>	<b>198,142</b>
	<b>1999</b>	<b>28,609</b>	<b>109,517</b>	<b>138,126</b>	<b>56,652</b>	<b>81,509</b>	<b>138,161</b>	<b>85,261</b>	<b>191,026</b>
	<b>1998</b>	<b>28,103</b>	<b>105,385</b>	<b>133,488</b>	<b>55,697</b>	<b>76,877</b>	<b>132,573</b>	<b>83,799</b>	<b>182,262</b>

(a) Since FTE figures have been rounded, discrepancies may occur between the sums of component items and totals.

Sources: ABS, Cat. No. 4221.0, *Schools Australia*, 1998, 1999, 2000

**Table 19 FTE<sup>(a)</sup> of school staff (teaching and non-teaching)<sup>(b)(c)</sup>, by category of school and level of education, by State, 2000**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia	Males	Females
<b>Government</b>											
<b>Teaching</b>											
Primary	25,787	18,526	16,671	6,709	8,339	2,334	1,516	1,256	81,137	17,844	63,292
Secondary	24,215	17,134	12,246	5,197	6,559	2,026	739	1,358	69,474	31,802	37,672
Total	50,002	35,660	28,917	11,906	14,898	4,360	2,255	2,614	150,610	49,646	100,964
<b>Non-teaching</b>											
Primary	6,361	4,810	7,770	2,335	3,041	763	515	361	25,954	3,603	22,351
Secondary	5,655	3,848	5,070	1,484	1,934	568	272	294	19,126	3,805	15,321
Total	12,016	8,658	12,839	3,819	4,975	1,330	787	655	45,080	7,408	37,672
Total	62,018	44,319	41,756	15,725	19,873	5,690	3,042	3,268	195,690	57,055	138,636
<b>Catholic</b>											
<b>Teaching</b>											
Primary	6,278	5,278	3,136	1,363	1,766	361	180	401	18,763	3,471	15,291
Secondary	7,901	5,767	3,294	1,231	1,787	440	133	554	21,107	9,227	11,880
Total	14,179	11,045	6,430	2,594	3,553	801	313	955	39,869	12,698	27,172
<b>Non-teaching</b>											
Primary	1,121	997	993	346	834	114	82	78	4,566	479	4,088
Secondary	1,894	1,872	1,164	404	615	152	53	175	6,327	1,832	4,494
Total	3,015	2,869	2,157	750	1,449	266	135	253	10,893	2,311	8,582
Total	17,194	13,914	8,587	3,344	5,002	1,066	448	1,208	50,762	15,009	35,753
<b>Independent</b>											
<b>Teaching</b>											
Primary	9,382	7,810	5,030	2,475	2,825	604	279	535	28,941	6,033	22,908
Secondary	13,054	11,020	6,507	2,497	3,472	819	293	838	38,499	17,463	21,037
Total	22,436	18,830	11,537	4,972	6,297	1,424	572	1,373	67,440	23,496	43,944
<b>Non-teaching</b>											
Primary	1,014	938	988	354	540	85	64	40	4,021	1,095	2,926
Secondary	1,541	2,046	1,335	482	697	140	85	105	6,434	2,381	4,054
Total	2,556	2,984	2,323	835	1,236	225	150	146	10,455	3,476	6,980
Total	10,813	10,769	7,429	3,213	3,981	849	409	564	38,026	14,274	23,753
<b>All schools</b>											
<b>Teaching</b>											
Primary	35,169	26,336	21,701	9,183	11,164	2,939	1,794	1,791	110,077	23,878	86,200
Secondary	37,269	28,154	18,753	7,694	10,031	2,845	1,032	2,195	107,973	49,265	58,708
Total	72,438	54,490	40,453	16,877	21,195	5,784	2,827	3,987	218,050	73,142	144,908
<b>Non-teaching</b>											
Primary	8,496	6,744	9,750	3,034	4,415	962	661	479	34,542	5,177	29,365
Secondary	9,090	7,767	7,569	2,370	3,246	860	410	574	31,887	8,018	23,869
Total	17,586	14,511	17,319	5,405	7,661	1,822	1,072	1,053	66,429	13,195	53,234
<b>Total all schools</b>											
2000	90,024	69,001	57,772	22,282	28,856	7,605	3,898	5,040	284,479	86,337	198,141
1999	88,868	66,788	54,086	22,021	28,164	7,504	3,822	5,036	276,287	85,261	191,026
1998	87,144	63,910	50,256	21,752	26,995	7,381	3,634	4,988	266,061	84,441	179,907

(a) Since FTE figures have been rounded, discrepancies may occur between the sums of component items and totals.

(b) As from 1990, staff employed in special schools have been allocated to either primary or secondary education on a pro-rata basis.

(c) 'Teaching staff' are staff who spend the majority of their time in contact with students and have teaching duties; that is, they are engaged to impart the school curriculum or are engaged in the provision of services for the direct benefit of students. 'Non-teaching staff' include specialist support staff (eg counsellors); teacher aides and assistants; administrative and clerical staff; and building operations, general maintenance and other services staff.

Sources: MCEETYA, *National Schools Statistics Collection*, 1998, 1999, 2000

## Student–staff ratios

**Table 20** Full-time student teaching staff (FTE) ratios<sup>(a)(b)</sup>, by level of education, category of school and non-government affiliation, by State, 2000

Level of education	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
<b>Government</b>									
Primary	17.7	16.9	16.7	17.2	17.3	15.8	13.8	17.0	17.1
Secondary	12.5	12.5	12.4	11.3	12.5	12.9	10.8	12.5	12.4
Total	15.2	14.8	14.9	14.6	15.2	14.4	12.8	14.7	14.9
<b>Catholic</b>									
Primary	19.6	19.3	18.1	18.6	18.1	19.2	19.9	21.6	19.1
Secondary	13.4	13.4	13.3	13.2	13.4	13.3	11.2	14.1	13.4
Total	16.2	16.2	15.6	16.1	15.8	15.9	16.2	17.3	16.1
<b>Independent</b>									
Primary	16.0	14.4	16.5	16.7	15.1	14.6	16.3	16.3	15.6
Secondary	10.8	11.0	12.6	11.8	11.9	11.7	11.1	11.9	11.4
Total	12.7	12.1	14.1	14.1	13.1	12.8	13.1	13.3	13.0
<b>Total non-government</b>									
Primary	18.4	17.7	17.5	17.8	17.0	17.3	18.6	20.3	17.9
Secondary	12.4	12.3	13.0	12.5	12.7	12.6	11.2	13.3	12.5
Total	14.9	14.5	15.0	15.1	14.6	14.6	14.8	16.1	14.8
<b>All schools</b>									
Primary	17.9	17.2	16.9	17.4	17.2	16.1	14.6	18.0	17.3
Secondary	12.5	12.4	12.6	11.7	12.5	12.8	10.9	12.8	12.4
<b>Total</b>	<b>2000</b>	<b>15.1</b>	<b>14.7</b>	<b>14.9</b>	<b>14.8</b>	<b>15.0</b>	<b>14.4</b>	<b>13.2</b>	<b>15.2</b>
	<b>1999</b>	<b>15.2</b>	<b>14.9</b>	<b>14.8</b>	<b>14.9</b>	<b>15.1</b>	<b>14.6</b>	<b>13.1</b>	<b>15.1</b>
	<b>1998</b>	<b>15.3</b>	<b>15.3</b>	<b>15.5</b>	<b>15.0</b>	<b>15.4</b>	<b>14.8</b>	<b>13.5</b>	<b>15.3</b>

Note: These ratios are not measures of class size.

(a) Full-time student–teaching staff (FTE) ratio was calculated by dividing the number of full-time students by the FTE of total teaching staff.

(b) Teaching staff includes principals, deputy principals, librarians and senior teachers mainly involved in administrative duties, together with some guidance, counselling and careers advisers.

Sources: ABS, Cat. No. 4221.0, *Schools Australia*, 2000 and earlier related publications

## Teacher education

**Table 21** Enrolments in teacher education courses by level of course and field of study<sup>(a)</sup>, Australia, 2000

Area of specialisation	Higher <sup>(b)</sup> degree	Other post- graduate <sup>(c)</sup>	Bachelor <sup>(d)</sup>	Other <sup>(e)</sup>	Total	Total Indigenous enrolments	Total NESB enrolments
<b>Initial teacher education<sup>(f)</sup></b>							
General	21	294	3,926	0	4,241	61	32
Early childhood	0	147	6,136	83	6,366	170	68
Primary	17	536	20,535	1	21,089	473	106
Secondary	2	3,090	10,957	0	14,049	173	198
TAFE	0	94	528	72	694	12	6
Special	0	3	495	44	542	2	6
Other	81	331	1,065	295	1,772	148	20
Total	121	4,495	43,604	495	48,715	1,039	436
<b>Post-initial teacher education<sup>(g)</sup></b>							
General	2,906	887	2,020	0	5,813	46	99
Early childhood	80	136	911	0	1,127	14	19
Primary	52	191	1,700	0	1,943	12	15
Secondary	127	292	109	0	528	5	21
TAFE	37	47	209	0	293	7	1
Special	479	467	548	0	1,494	10	13
Other	917	1,366	205	0	2,488	16	34
Total	4,598	3,386	5,702	0	13,686	110	202
<b>Total enrolments</b>	<b>4,719</b>	<b>7,881</b>	<b>49,306</b>	<b>495</b>	<b>62,401</b>	<b>1,149</b>	<b>638</b>

(a) The data take into account the coding of combined courses in two fields of study. Counting both combined courses means that the data in the total may be less than the sum of all Broad Fields of Study.

(b) Includes doctorate by research, doctorate by coursework, Masters by research and Masters by coursework.

(c) Includes postgraduate qualifying or preliminary and graduate/postgraduate diploma and graduate certificate.

(d) Includes Bachelor's graduate entry, Bachelor's honours and Bachelor's pass.

(e) Includes associate degree, advanced diploma (AQF), diploma (AQF), other award course, enabling course, or non-award course.

(f) Refers to people not previously qualified as teachers.

(g) Refers to people already holding teaching qualifications and seeking further teaching qualifications.

Note: This table is not comparable with tables published in previous National Reports. Overseas students enrolling or graduating from teacher education courses will no longer be included in this table. It is expected that these students will return to their country of origin following completion of their studies.

Source: DETYA

**Table 22 Persons graduating in teacher education courses by level of course and field of study<sup>(a)</sup>, Australia, 2000**

Area of specialisation	Higher <sup>(b)</sup> degree	Other post- graduate <sup>(c)</sup>	Bachelor <sup>(d)</sup>	Other <sup>(e)</sup>	Total	Total Indigenous completion	Total NESB completion
<b>Initial teacher education<sup>(f)</sup></b>							
General	12	463	771	0	1,246	13	18
Early childhood	0	105	1,169	2	1,276	11	30
Primary	3	345	3,052	19	3,419	50	36
Secondary	0	1,997	1,924	0	3,921	21	109
TAFE	0	96	110	30	236	2	5
Special	0	0	78	4	82	0	3
Other	5	184	388	65	642	31	11
Total	20	3,190	7,483	120	10,813	128	212
<b>Post-initial teacher education<sup>(g)</sup></b>							
General	983	533	1,206	1	2,723	17	138
Early childhood	29	54	280	0	363	3	0
Primary	0	153	868	0	1,021	4	14
Secondary	3	158	42	0	203	1	17
TAFE	5	28	53	0	86	1	3
Special	219	220	225	0	664	1	19
Other	420	865	82	2	1,369	10	96
Total	1,659	2,011	2,752	3	6,425	37	287
<b>Total persons graduating</b>	<b>1,679</b>	<b>5,201</b>	<b>10,235</b>	<b>123</b>	<b>17,238</b>	<b>165</b>	<b>499</b>

(a) The data take into account the coding of combined courses in two fields of study. Counting both combined courses means that the data in the total may be less than the sum of all Broad Fields of Study.

(b) Includes doctorate by research, doctorate by coursework, Masters by research and Masters by coursework.

(c) Includes postgraduate qualifying or preliminary and graduate/postgraduate diploma and graduate certificate.

(d) Includes Bachelor's graduate entry, Bachelor's honours and Bachelor's pass.

(e) Includes associate degree, advanced diploma (AQF), diploma (AQF), other award course, enabling course, or non-award course.

(f) Refers to people not previously qualified as teachers.

(g) Refers to people already holding teaching qualifications and seeking further teaching qualifications.

Note: This table is not comparable with tables published in previous National Reports. Overseas students enrolling or graduating from teacher education courses will no longer be included in this table. It is expected that these students will return to their country of origin following completion of their studies.

Source: DETYA

# Resourcing

## Expenditure – government

**Table 23 Expenditure by government education systems, by level of education and area of expenditure, by State, 1999–2000 financial year (\$'000 – accrual<sup>(a)</sup> financial reporting)**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
<b>In-school, primary education</b>									
Teaching staff salaries	1,677,453	1,134,906	969,719	415,319	495,229	145,387	101,679	82,272	5,021,964
Non-teaching staff salaries	243,646	165,952	249,640	89,798	106,486	26,843	32,480	15,458	930,303
Redundancy payments	n.a.	n.a.	n.a.	2,803	57	n.a.	1,171	210	4,241
Non-salary costs	713,048	674,583	656,025	197,081	186,011	68,328	68,644	35,852	2,599,572
<b>Total recurrent costs</b>	<b>2,634,147</b>	<b>1,975,441</b>	<b>1,875,384</b>	<b>705,001</b>	<b>787,783</b>	<b>240,558</b>	<b>203,974</b>	<b>133,792</b>	<b>8,556,080</b>
Capital/investing costs	111,647	91,183	141,978	16,875	69,494	4,542	8,260	2,373	446,352
<b>Sub-total</b>	<b>2,745,794</b>	<b>2,066,624</b>	<b>2,017,362</b>	<b>721,876</b>	<b>857,277</b>	<b>245,100</b>	<b>212,234</b>	<b>136,165</b>	<b>9,002,432</b>
<b>In-school, secondary education</b>									
Teaching staff salaries	1,564,233	1,059,438	707,545	321,755	408,422	127,432	52,416	93,652	4,334,893
Non-teaching staff salaries	226,922	134,048	160,616	63,598	81,476	19,899	20,549	11,310	718,418
Redundancy payments	n.a.	n.a.	n.a.	2,172	194	n.a.	607	360	3,333
Non-salary costs	613,751	625,623	428,635	119,239	152,854	62,156	40,294	39,748	2,082,300
<b>Total recurrent costs</b>	<b>2,404,906</b>	<b>1,819,109</b>	<b>1,296,796</b>	<b>506,764</b>	<b>642,946</b>	<b>209,487</b>	<b>113,866</b>	<b>145,070</b>	<b>7,138,944</b>
Capital/investing costs	74,433	59,103	73,140	19,204	92,987	6,920	600	6,680	333,067
<b>Sub-total</b>	<b>2,479,339</b>	<b>1,878,212</b>	<b>1,369,936</b>	<b>525,968</b>	<b>735,933</b>	<b>216,407</b>	<b>114,466</b>	<b>151,750</b>	<b>7,472,011</b>
<b>Out-of-school</b>									
Teaching staff salaries	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-teaching staff salaries	151,057	51,904	115,463	54,762	59,079	19,407	30,148	13,403	495,223
Redundancy payments	1,532	829	63	835	352	n.a.	245	n.a.	3,856
Non-salary costs	82,700	120,820	80,401	33,993	53,215	8,589	12,003	6,292	398,013
<b>Total recurrent costs</b>	<b>235,289</b>	<b>173,553</b>	<b>195,927</b>	<b>89,590</b>	<b>112,646</b>	<b>27,996</b>	<b>42,396</b>	<b>19,695</b>	<b>897,092</b>
Capital/investing costs	5,366	11,097	6,291	178	281	n.a.	409	n.a.	23,622
<b>Sub-total</b>	<b>240,655</b>	<b>184,650</b>	<b>202,218</b>	<b>89,768</b>	<b>112,927</b>	<b>27,996</b>	<b>42,805</b>	<b>19,695</b>	<b>920,714</b>
<b>Total</b>	<b>5,465,788</b>	<b>4,129,486</b>	<b>3,589,516</b>	<b>1,337,612</b>	<b>1,706,137</b>	<b>489,503</b>	<b>369,505</b>	<b>307,610</b>	<b>17,395,157</b>

(a) From 1999–2000 MCEETYA has moved to accrual financial reporting. To allow comparisons to be made with previous years, data for 1998–99 have been recalculated using accrual accounting and are included at Table 24. Cash accounting data for the years 1998–99 and 1999–2000 are also included (see Tables 25 and 26) to allow comparison with the previous accounting format in the transition period.

n.a. not applicable.

Note: Non-salary costs include other operating expenses, grants and subsidies, capital charges (only applicable to Victoria, Queensland and ACT) and depreciation.

Users wishing to publish this data should provide suitable explanatory notes and be aware that the data do not represent total government expenditure on school-level education. They specifically exclude items such as:

- Commonwealth direct payments to parents and/or students, eg AUSTUDY
- preschools and TAFE establishments
- sinking fund payments and interest on Commonwealth loans
- teacher housing
- student hostel provisions
- funds raised by schools, school councils or community organisations.

Source: MCEETYA, *National Schools Statistics Collection*, 2000



**Table 24 Expenditure by government education systems, by level of education and area of expenditure, by State, 1998–1999 financial year (\$'000 – accrual<sup>(a)</sup> financial reporting)**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
<b>In-school, primary education</b>									
Teaching staff salaries	1,602,004	1,060,585	902,695	414,455	469,114	137,320	93,745	79,703	4,759,621
Non-teaching staff salaries	226,814	164,323	219,737	86,892	92,880	25,534	24,907	14,580	855,667
Redundancy payments	n.a.	n.a.	n.a.	8,600	47	n.a.	1,099	n.a.	9,746
Non-salary costs	657,599	688,944	629,402	178,853	166,884	63,947	59,826	35,023	2,480,478
<b>Total recurrent costs</b>	<b>2,486,417</b>	<b>1,913,852</b>	<b>1,751,834</b>	<b>688,800</b>	<b>728,925</b>	<b>226,801</b>	<b>179,577</b>	<b>129,306</b>	<b>8,105,512</b>
Capital/investing costs	92,365	75,349	113,780	10,549	54,173	4,710	13,696	3,224	367,846
<b>Sub-total</b>	<b>2,578,782</b>	<b>1,989,201</b>	<b>1,865,614</b>	<b>699,349</b>	<b>783,098</b>	<b>231,511</b>	<b>193,273</b>	<b>132,530</b>	<b>8,473,358</b>
<b>In-school, secondary education</b>									
Teaching staff salaries	1,541,575	990,059	677,502	301,445	392,932	126,916	54,797	91,288	4,176,514
Non-teaching staff salaries	214,796	132,891	142,005	57,098	76,315	19,415	16,597	11,188	670,305
Redundancy payments	n.a.	n.a.	n.a.	6,286	412	n.a.	662	n.a.	7,360
Non-salary costs	625,783	629,750	394,994	115,467	148,039	62,405	37,671	42,008	2,056,117
<b>Total recurrent costs</b>	<b>2,382,154</b>	<b>1,752,700</b>	<b>1,214,501</b>	<b>480,296</b>	<b>617,698</b>	<b>208,736</b>	<b>109,727</b>	<b>144,484</b>	<b>6,910,296</b>
Capital/investing costs	61,576	76,602	79,068	11,741	55,514	1,047	2,695	7,883	296,126
<b>Sub-total</b>	<b>2,443,730</b>	<b>1,829,302</b>	<b>1,293,569</b>	<b>492,037</b>	<b>673,212</b>	<b>209,783</b>	<b>112,422</b>	<b>152,367</b>	<b>7,206,422</b>
<b>Out-of-school</b>									
Teaching staff salaries	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-teaching staff salaries	125,256	47,608	100,867	46,545	56,877	16,458	32,253	15,991	441,855
Redundancy payments	n.a.	n.a.	n.a.	203	1,404	n.a.	268	n.a.	1,875
Non-salary costs	81,270	124,080	62,567	32,238	58,354	7,695	5,491	5,287	376,982
<b>Total recurrent costs</b>	<b>206,526</b>	<b>171,688</b>	<b>163,434</b>	<b>78,986</b>	<b>116,635</b>	<b>24,153</b>	<b>38,012</b>	<b>21,278</b>	<b>820,712</b>
Capital/investing costs	4,696	16,982	4,995	272	2,347	n.a.	223	n.a.	29,515
<b>Sub-total</b>	<b>211,222</b>	<b>188,670</b>	<b>168,429</b>	<b>79,258</b>	<b>118,982</b>	<b>24,153</b>	<b>38,235</b>	<b>21,278</b>	<b>850,227</b>
<b>Total</b>	<b>5,233,734</b>	<b>4,007,173</b>	<b>3,327,612</b>	<b>1,270,644</b>	<b>1,575,292</b>	<b>465,447</b>	<b>343,930</b>	<b>306,175</b>	<b>16,530,007</b>

(a) From 1999–2000 MCEETYA has moved to accrual financial reporting. To allow comparisons to be made with previous years, data for 1998–99 have been recalculated here using accrual accounting. Cash accounting data for the years 1998–99 and 1999–2000 are also included (see Tables 25 and 26) to allow comparison with the previous accounting format in the transition period.

n.a. not applicable.

Note: Non-salary costs include other operating expenses, grants and subsidies, capital charges (only applicable to Victoria, Queensland and ACT) and depreciation.

Users wishing to publish this data should provide suitable explanatory notes and be aware that the data do not represent total government expenditure on school-level education. They specifically exclude items such as:

- Commonwealth direct payments to parents and/or students, eg AUSTUDY
- preschools and TAFE establishments
- sinking fund payments and interest on Commonwealth loans
- teacher housing
- student hostel provisions
- funds raised by schools, school councils or community organisations.

Source: MCEETYA, *National Schools Statistics Collection*, 2000

**Table 25 Expenditure by government education systems, by level of education and area of expenditure, by State, 1999–2000 financial year (\$'000 – cash<sup>(a)</sup> basis)**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
<b>In-school, primary education</b>									
Teaching staff salaries	1,422,851	1,074,973	834,807	350,956	439,618	117,519	74,119	67,740	4,382,583
Non-teaching staff salaries	206,666	146,559	210,176	73,273	95,153	21,977	22,823	13,083	789,710
Non-salary costs	743,957	440,969	447,870	188,062	231,325	67,521	58,017	26,141	2,203,862
Sub-total	2,373,474	1,662,501	1,492,853	612,291	766,096	207,017	154,959	106,964	7,376,155
<b>In-school, secondary education</b>									
Teaching staff salaries	1,321,871	1,004,092	612,889	286,090	363,036	103,005	37,979	76,902	3,805,864
Non-teaching staff salaries	191,763	118,216	135,522	52,060	72,374	16,294	12,337	9,260	607,826
Non-salary costs	657,429	346,723	286,624	115,607	241,736	65,003	36,513	29,517	1,779,152
Sub-total	2,171,063	1,469,031	1,035,035	453,757	677,146	184,302	86,829	115,679	6,192,842
<b>Out-of-school</b>									
Teaching staff salaries	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-teaching staff salaries	134,049	62,709	90,719	46,276	52,916	15,542	20,300	13,075	435,586
Non-salary costs	104,881	62,925	70,990	44,062	50,272	11,306	10,339	6,268	361,043
Sub-total	238,930	125,634	161,709	90,338	103,188	26,848	30,639	19,343	796,629
<b>Total</b>	<b>4,783,467</b>	<b>3,257,166</b>	<b>2,689,597</b>	<b>1,156,386</b>	<b>1,546,430</b>	<b>418,167</b>	<b>272,427</b>	<b>241,986</b>	<b>14,365,626</b>

(a) From 1999–2000 MCEETYA has moved to accrual financial reporting (see Table 23). To allow comparisons to be made with previous years, data for 1998–99 have been recalculated using accrual accounting and are included at Table 24. Cash accounting data for the years 1998–99 and 1999–2000 are included here and in Table 26 to allow comparison with the new accounting format in the transition period.

n.a. not applicable.

Note: Non-salary costs include goods and services, cleaning and the provision of buildings and grounds. Users wishing to publish this data should provide suitable explanatory notes and be aware that the data do not represent total government expenditure on school-level education. They specifically exclude items such as:

- Commonwealth direct payments to parents and/or students, eg AUSTUDY
- preschools and TAFE establishments
- superannuation, payroll tax, long service leave provisions, depreciation and sinking fund payments, interest on Commonwealth loans, teacher housing
- student hostel provisions
- funds raised by schools, school councils or community organisations.

Source: MCEETYA, *National Schools Statistics Collection*, 2000

**Table 26 Expenditure by government education systems, by level of education and area of expenditure, by State, 1998–1999 financial year (\$'000 – cash basis)**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
<b>In-school, primary education</b>									
Teaching staff salaries	1,340,000	905,806	759,504	349,876	417,508	114,344	67,299	66,270	4,020,607
Non-teaching staff salaries	189,719	109,746	164,697	70,926	82,357	21,371	17,383	12,842	669,041
Non-salary costs	692,367	501,871	482,900	151,602	202,589	60,897	65,945	20,917	2,179,088
Sub-total	2,222,086	1,517,423	1,407,101	572,404	702,454	196,612	150,627	100,029	6,868,736
<b>In-school, secondary education</b>									
Teaching staff salaries	1,288,934	834,423	579,887	271,748	349,553	105,681	39,338	72,832	3,542,396
Non-teaching staff salaries	179,594	106,530	102,269	48,542	67,842	16,290	11,413	10,813	543,293
Non-salary costs	628,411	347,659	256,415	112,674	198,452	58,413	34,840	24,592	1,661,456
Sub-total	2,096,939	1,288,612	938,571	432,964	615,847	180,384	85,591	108,237	5,747,145
<b>Out-of-school</b>									
Teaching staff salaries	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Non-teaching staff salaries	103,364	62,032	73,468	41,228	51,954	13,643	20,130	11,904	377,723
Non-salary costs	88,346	82,461	72,917	44,198	60,556	10,048	12,174	10,838	381,538
Sub-total	191,710	144,493	146,385	85,426	112,510	23,691	32,304	22,742	759,261
<b>Total</b>	<b>4,510,735</b>	<b>2,950,528</b>	<b>2,492,057</b>	<b>1,090,794</b>	<b>1,430,811</b>	<b>400,687</b>	<b>268,522</b>	<b>231,008</b>	<b>13,375,142</b>

(a) From 1999–2000 MCEETYA has moved to accrual financial reporting (see Table 23). To allow comparisons to be made with previous years, data for 1998–99 have been recalculated using accrual accounting and are included at Table 24. Cash accounting data for the years 1998–99 and 1999–2000 are included here and in Table 25 to allow comparison with the new accounting format in the transition period.

n.a. not applicable.

Note: Non-salary costs include goods and services, cleaning and the provision of buildings and grounds. Users wishing to publish this data should provide suitable explanatory notes and be aware that the data do not represent total government expenditure on school-level education. They specifically exclude items such as:

- Commonwealth direct payments to parents and/or students, eg AUSTUDY
- preschools and TAFE establishments
- superannuation, payroll tax, long service leave provisions, depreciation and sinking fund payments, interest on Commonwealth loans, teacher housing
- student hostel provisions
- funds raised by schools, school councils or community organisations.

Source: MCEETYA, *National Schools Statistics Collection*, 2000

**Table 27 Per capita expenditure on government schools, by level of education, by State, 1998–99, 1999–2000 financial years (\$ per FTE student accrual<sup>(a)</sup> financial reporting)**

Recurrent per capita expenditure						
State	Primary		Secondary		Total	
	1998–99	1999–2000	1998–99	1999–2000	1998–99	1999–2000
New South Wales	5,741	6,092	7,987	8,113	6,649	6,907
Victoria	6,528	6,662	8,501	8,753	7,337	7,517
Queensland	6,825	7,249	8,409	8,896	7,391	7,838
South Australia	6,326	6,578	8,569	8,637	7,079	7,297
Western Australia	5,547	5,950	8,041	8,217	6,449	6,779
Tasmania	6,685	7,017	8,121	7,935	7,301	7,415
Northern Territory	10,025	11,266	15,299	15,021	11,479	12,346
Australian Capital Territory	6,512	6,728	8,911	8,995	7,576	7,732
Australia	6,258	6,585	8,328	8,540	7,059	7,344
Investing per capita expenditure						
State	Primary		Secondary		Total	
	1998–99	1999–2000	1998–99	1999–2000	1998–99	1999–2000
New South Wales	209	252	206	249	208	251
Victoria	277	313	390	295	323	306
Queensland	430	529	534	491	467	515
South Australia	92	146	200	309	128	203
Western Australia	384	482	687	1,118	494	715
Tasmania	131	124	39	248	91	178
Northern Territory	671	411	351	86	583	318
Australian Capital Territory	149	110	456	391	285	234
Australia	281	333	354	391	309	355
Total per capita expenditure						
State	1998–99		1999–2000			
	Recurrent	Investing	Recurrent	Investing		
New South Wales	6,649	208	6,907	251		
Victoria	7,337	323	7,517	306		
Queensland	7,391	467	7,838	515		
South Australia	7,079	128	7,297	203		
Western Australia	6,449	494	6,779	715		
Tasmania	7,301	91	7,415	178		
Northern Territory	11,479	583	12,346	318		
Australian Capital Territory	7,576	285	7,732	234		
Australia	7,059	309	7,344	355		

(a) From 1999–2000 MCEETYA has moved to accrual financial reporting. To allow comparisons to be made with previous years, data for 1998–99 have been recalculated using accrual accounting and are included here. Cash accounting data for the years 1998–99 and 1999–2000 are included at Table 28 to allow comparison with the previous accounting format in the transition period.

Note: These tables incorporate both salaries and non-salary costs which include salary on costs such as superannuation, payroll tax and workers compensation. Non-salary costs include other operating expenses, grants and subsidies, capital charges (only applicable to Victoria, Queensland and ACT) and depreciation. Users wishing to publish this data should provide suitable explanatory notes and be aware that the data do not represent total government expenditure on school-level education. They specifically exclude items such as:

- Commonwealth direct payments to parents and/or students, eg AUSTUDY
- preschools and TAFE establishments
- sinking fund payments and interest on Commonwealth loans
- teacher housing and student hostel provisions
- funds raised by schools, school councils or community organisations.

Source: MCEETYA, *National Schools Statistics Collection*, 2000

**Table 28 Per capita expenditure<sup>(a)(b)</sup> on government schools, by level of education, by State, 1998–99, 1999–2000 financial years (\$ – cash<sup>(c)</sup> format)**

State	Primary		Secondary		Total	
	1998–99	1999–2000	1998–99	1999–2000	1998–99	1999–2000
New South Wales	5,140	5,524	7,043	7,359	5,910	6,264
Victoria	5,192	5,568	6,285	7,041	5,640	6,171
Queensland	5,517	5,784	6,546	7,113	5,885	6,259
South Australia	5,369	5,784	7,806	7,790	6,187	6,485
Western Australia	5,346	5,758	8,000	8,586	6,306	6,792
Tasmania	5,839	6,081	7,063	7,016	6,364	6,486
Northern Territory	8,424	8,505	12,027	11,396	9,417	9,336
Australian Capital Territory	5,199	5,472	6,850	7,266	5,931	6,267
<b>Australia</b>	<b>5,331</b>	<b>5,687</b>	<b>6,961</b>	<b>7,416</b>	<b>5,962</b>	<b>6,358</b>

- (a) Expenditure on provision of buildings and grounds is included. It is estimated that this amounts to \$347 per student for Australia overall; primary \$305; secondary \$399 for 1999–2000.
- (b) Expenditure on superannuation, ie employer liability, is excluded. It is estimated that this amounts to \$445 per student for Australia for 1999–2000.
- (c) From 1999–2000 MCEETYA has moved to accrual financial reporting. To allow comparisons to be made with previous years, data for 1998–99 has been recalculated using accrual accounting and is included at Table 27. Cash accounting data for the years 1998–99 and 1999–2000 are included here to allow comparison with the new accounting format in the transition period.

Note: The expenditure base used to derive the per capita figures specifically excludes:

- expenditure on sessional preschools and technical and further education
- private expenditure, ie funds raised by schools, school councils or community organisations
- expenditure on superannuation, payroll tax, provision for long service leave, depreciation and sinking fund payments, interest on Commonwealth loans, staff accommodation (including all payments to housing authorities)
- expenditure on accruals, provisions, commitments and liabilities
- direct payment of allowances by the Commonwealth to individual students and/or parents
- salaries of staff and operating expenses of student hostels, including hostel subsidies
- expenditure on children in residential care programs
- all known and clearly identifiable expenditure by government school systems on non-government schools.

Specific inclusions in the base used to derive the per capita figures are:

- expenditure on special schools
- Commonwealth grants for education
- expenditure on behalf of the Director-General of Education (or equivalent) by other State government agencies
- expenditure financed from DETYA joint programs apportioned where possible between the government and non-government systems and only that portion expended on the government school system included
- payments to staff in the form of allowances for accommodation.

Source: MCEETYA, *National Schools Statistics Collection*, 2000

**Table 29 All government outlays on primary and secondary education as a percentage of gross domestic product (GDP)**

Year	Percentage of GDP
1988–89	2.8
1989–90	2.7
1990–91	2.8
1991–92	3.0
1992–93	2.9
1993–94	2.8
1994–95	2.7
1995–96	2.7
1996–97	2.7
1997–98	2.6
1998–99	2.9 <sup>r</sup>
1999–2000	2.9

r revised

Note: Data for 1997–98 and after are based on a revised methodology for calculating national accounts when compared with previous National Reports. Refer to ABS, Cat. No. 5253.0 for a detailed explanation of the changes.

Source: Derived by Commonwealth DETYA from ABS, Cat. No. 5518.0.55.001, *Australia, Expenditure on Education*, Table 1 and Table 3, and other unpublished data

## Income and expenditure – non-government

**Table 30 Expenditure of non-government schools, by level of education and area of expenditure, by State, 2000 calendar year (\$'000)**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
<b>Primary schools</b>									
Teaching staff salaries	357,624	277,434	160,397	77,854	84,853	15,044	8,395	20,825	1,002,428
Non-teaching staff salaries	59,952	40,270	40,490	16,223	27,091	3,552	2,987	3,604	194,174
Other costs <sup>(a)</sup>	255,076	168,392	96,368	64,131	65,917	10,359	7,224	12,144	679,613
Sub-total	672,653	486,097	297,256	158,208	177,862	28,956	18,607	36,574	1,876,216
<b>Secondary schools</b>									
Teaching staff salaries	401,199	283,558	153,134	41,997	74,082	13,374	10,002	25,356	1,002,705
Non-teaching staff salaries	72,260	72,690	39,462	10,550	18,224	3,181	2,837	5,950	225,157
Other costs <sup>(a)</sup>	293,115	256,674	132,820	42,933	73,668	9,737	9,166	20,564	838,682
Sub-total	766,575	612,922	325,418	95,481	165,976	26,294	22,006	51,871	2,066,546
<b>Combined schools</b>									
Teaching staff salaries	475,959	415,912	270,272	132,238	145,852	40,864	8,014	28,536	1,517,651
Non-teaching staff salaries	95,709	106,821	79,254	31,847	42,329	9,884	2,918	6,914	375,679
Other costs <sup>(a)</sup>	491,469	433,221	277,963	129,826	160,453	31,638	6,751	22,356	1,553,680
Sub-total	1,063,138	955,956	627,490	293,911	348,635	82,387	17,683	57,807	3,447,010
<b>Total</b>									
Teaching staff salaries	1,234,783	976,905	583,804	252,089	304,788	69,283	26,411	74,718	3,522,785
Non-teaching staff salaries	227,922	219,782	159,207	58,620	87,646	16,619	8,743	16,469	795,011
Other costs <sup>(a)</sup>	1,039,661	858,288	507,152	236,891	300,038	51,735	23,142	55,065	3,071,976
<b>TOTAL</b>	<b>2,502,367</b>	<b>2,054,976</b>	<b>1,250,164</b>	<b>547,602</b>	<b>692,473</b>	<b>137,638</b>	<b>58,297</b>	<b>146,253</b>	<b>7,389,773</b>

(a) See Table 31 for a breakdown of 'Other costs'.

Source: DETYA



**Table 31 Breakdown of 'Other costs' component of expenditure of non-government schools, States and Territories, 2000 calendar year (\$'000)**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
<b>Primary schools</b>									
Staff-related expenditure	58,841	36,642	20,997	10,877	12,866	2,329	1,189	3,269	147,015
Debt servicing	8,630	5,367	3,327	2,993	1,685	406	844	364	23,619
Other operating expenditure	95,570	72,166	44,019	23,078	28,669	4,080	3,252	6,336	277,172
Capital expenditure	92,034	54,215	28,024	27,182	22,695	3,542	1,937	2,173	231,805
<b>Total</b>	<b>255,076</b>	<b>168,392</b>	<b>96,368</b>	<b>64,131</b>	<b>65,917</b>	<b>10,359</b>	<b>7,224</b>	<b>12,144</b>	<b>679,613</b>
<b>Secondary schools</b>									
Staff-related expenditure	65,969	47,916	22,541	7,038	10,713	2,002	1,860	4,212	162,254
Debt servicing	13,885	9,772	4,762	2,804	2,413	478	222	773	35,112
Other operating expenditure	124,694	110,140	60,550	17,165	33,248	4,673	4,085	10,400	364,959
Capital expenditure	88,565	88,845	44,967	15,925	27,293	2,583	2,998	5,178	276,356
<b>Total</b>	<b>293,115</b>	<b>256,674</b>	<b>132,820</b>	<b>42,933</b>	<b>73,668</b>	<b>9,737</b>	<b>9,166</b>	<b>20,564</b>	<b>838,682</b>
<b>Combined schools</b>									
Staff-related expenditure	75,140	64,865	41,152	21,379	23,181	6,636	1,274	4,873	238,504
Debt servicing	33,965	15,172	24,819	5,984	7,192	1,871	695	1,316	91,018
Other operating expenditure	190,492	194,455	113,051	58,762	63,456	14,949	3,083	11,496	649,747
Capital expenditure	191,871	158,727	98,939	43,700	66,623	8,181	1,696	4,669	574,409
<b>Sub-total</b>	<b>491,469</b>	<b>433,221</b>	<b>277,963</b>	<b>129,826</b>	<b>160,453</b>	<b>31,638</b>	<b>6,751</b>	<b>22,356</b>	<b>1,553,680</b>
<b>Total</b>									
Staff-related expenditure	199,952	149,424	84,691	39,295	46,760	10,968	4,324	12,356	547,773
Debt servicing	56,481	30,312	32,909	11,782	11,291	2,756	1,763	2,454	149,750
Other operating expenditure	410,757	376,762	217,621	99,006	125,374	23,703	10,421	28,232	1,291,879
Capital expenditure	372,470	301,789	171,930	86,807	116,612	14,307	6,632	12,021	1,082,572
<b>Total</b>	<b>1,039,661</b>	<b>858,288</b>	<b>507,152</b>	<b>236,891</b>	<b>300,038</b>	<b>51,735</b>	<b>23,142</b>	<b>55,065</b>	<b>3,071,976</b>

Notes:

- 'Staff-related expenditure' includes superannuation, worker's compensation insurance, fringe benefits tax and long service leave provision.
- 'Debt servicing' includes bank interest charges for capital or recurrent loans. It does not include depreciation and amortisation expenses.
- 'Other operating expenditure' includes non-salary expenditure on teaching, materials, excursions, administrative and clerical services, buildings and ground maintenance and operation, rent and operating lease arrangements, and expenditure on finance leases. It also includes losses on the sale of fixed assets and other recurrent expenditure.
- 'Capital expenditure' includes expenditure on investment in land, buildings and improvements, furniture and equipment, plant and machinery, motor vehicles and the principal component of lease expenses.

Source: DETYA

**Table 32 Income and expenditure per student of non-government schools, by affiliation, by State, 2000 calendar year (\$ per student)**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
<b>Catholic schools</b>									
Fees and charges	1,241	1,352	1,328	1,688	1,273	1,114	867	1,437	1,317
Private donations and income	635	294	338	529	266	266	266	437	437
Total private income	1,876	1,646	1,666	2,217	1,539	1,380	1,133	1,874	1,754
State grants	1,331	1,038	1,281	1,068	1,458	1,296	1,624	1,190	1,235
Commonwealth grants	3,266	3,353	3,266	3,247	3,279	3,334	3,448	3,152	3,290
<b>Total income</b>	<b>6,473</b>	<b>6,037</b>	<b>6,212</b>	<b>6,532</b>	<b>6,277</b>	<b>6,010</b>	<b>6,205</b>	<b>6,216</b>	<b>6,279</b>
Recurrent expenditure	5,586	5,289	5,495	5,667	5,247	5,296	5,656	5,380	5,452
Capital expenditure	822	764	632	1,299	894	675	464	487	799
<b>Total expenditure</b>	<b>6,408</b>	<b>6,053</b>	<b>6,127</b>	<b>6,966</b>	<b>6,141</b>	<b>5,972</b>	<b>6,120</b>	<b>5,867</b>	<b>6,251</b>
<i>Loans at end of year</i>	1,403	1,165	1,028	2,330	2,258	1,395	2,224	741	1,406
<i>Loans at start of year</i>	1,135	1,067	869	1,949	2,155	1,353	1,935	681	1,221
<i>Annual movement in borrowing</i>	268	99	159	381	103	42	289	61	186
<b>Independent schools</b>									
Fees and charges	5,490	6,449	3,592	3,778	3,965	4,174	2,330	5,371	4,975
Private donations and income	716	598	426	491	508	287	574	656	571
Total private income	6,206	7,048	4,018	4,269	4,473	4,461	2,904	6,027	5,546
State grants	1,119	758	1,194	1,062	1,314	1,301	2,324	1,039	1,069
Commonwealth grants	1,999	1,898	2,531	2,375	2,387	1,984	4,624	2,051	2,182
<b>Total income</b>	<b>9,324</b>	<b>9,704</b>	<b>7,742</b>	<b>7,706</b>	<b>8,174</b>	<b>7,745</b>	<b>9,852</b>	<b>9,117</b>	<b>8,797</b>
Recurrent expenditure	8,084	8,539	6,845	6,795	6,948	6,864	8,130	8,064	7,686
Capital expenditure	1,753	1,749	1,430	988	1,690	700	1,368	707	1,565
<b>Total expenditure</b>	<b>9,837</b>	<b>10,289</b>	<b>8,275</b>	<b>7,783</b>	<b>8,638</b>	<b>7,564</b>	<b>9,499</b>	<b>8,772</b>	<b>9,251</b>
<i>Loans at end of year</i>	4,448	2,669	5,548	3,237	4,493	2,301	3,365	3,339	4,028
<i>Loans at start of year</i>	3,963	2,426	4,825	2,999	3,709	2,280	3,062	3,413	3,571
<i>Annual movement in borrowing</i>	485	243	723	237	784	21	303	-74	458
<b>All non-government schools</b>									
Fees and charges	2,575	3,108	2,278	2,612	2,279	2,304	1,521	2,439	2,624
Private donations and income	661	399	375	512	357	274	403	492	485
Total private income	3,235	3,506	2,653	3,124	2,636	2,578	1,924	2,931	3,110
State grants	1,265	942	1,244	1,065	1,404	1,298	1,937	1,152	1,175
Commonwealth grants	2,868	2,852	2,958	2,861	2,946	2,809	3,973	2,872	2,894
<b>Total income</b>	<b>7,368</b>	<b>7,300</b>	<b>6,854</b>	<b>7,051</b>	<b>6,986</b>	<b>6,685</b>	<b>7,833</b>	<b>6,955</b>	<b>7,179</b>
Recurrent expenditure	6,371	6,408	6,061	6,166	5,883	5,906	6,761	6,063	6,251
Capital expenditure	1,114	1,103	967	1,162	1,191	685	868	543	1,073
<b>Total expenditure</b>	<b>7,485</b>	<b>7,512</b>	<b>7,028</b>	<b>7,327</b>	<b>7,074</b>	<b>6,591</b>	<b>7,629</b>	<b>6,606</b>	<b>7,323</b>
<i>Loans at end of year</i>	2,359	1,683	2,924	2,731	3,093	1,747	2,733	1,403	2,343
<i>Loans at start of year</i>	2,023	1,535	2,529	2,414	2,736	1,713	2,438	1,376	2,060
<i>Annual movement in borrowing</i>	336	148	395	317	357	34	295	27	283

Note:

- Excludes amounts related to boarding facilities and special schools, direct payments by the Commonwealth to students and/or parents.
- Includes debt servicing of loans for capital and operating purposes.
- 'Capital expenditure' excludes loan principal repayments.
- Expenditure of system offices is allocated across the schools in proportion to enrolments.
- Where figures have been rounded, discrepancies may occur between the sums of component items and totals.

Source: DETYA

**Table 33 Per student expenditure of non-government schools, by affiliation and level of education, by State, 2000 (\$ per student)**

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia
<b>Catholic</b>									
Primary	5,187	4,494	4,806	5,761	4,576	4,969	4,915	4,283	4,868
Secondary	7,562	7,811	7,840	8,464	7,924	7,019	8,454	7,485	7,726
Combined	7,936	9,529	6,981	7,865	7,982	6,380	6,421	7,181	7,807
<b>Total</b>	6,408	6,053	6,127	6,966	6,141	5,972	6,120	5,867	6,251
<b>Independent</b>									
Primary	6,878	6,421	6,329	5,483	5,284	5,817	8,027	5,590	6,215
Secondary	10,400	11,596	10,922	9,685	8,834	7,567	11,845	9,304	10,539
Combined	10,176	10,477	8,237	8,316	9,226	7,655	8,414	8,911	9,531
<b>Total</b>	9,837	10,289	8,275	7,783	8,638	7,564	9,499	8,772	9,251
<b>Total non-government</b>									
Primary	5,338	4,601	4,957	5,680	4,674	5,028	5,941	4,337	5,005
Secondary	7,737	8,080	8,251	8,905	8,021	7,027	10,362	7,743	7,999
Combined	9,733	10,383	7,996	8,128	8,908	7,239	7,411	8,252	9,172
<b>Total</b>	7,485	7,512	7,028	7,327	7,074	6,591	7,629	6,606	7,323

Note:

- Excludes amounts related to boarding facilities and special schools, direct payments by the Commonwealth and States to students and/or parents, salaries of staff and operating expenses of the boarding house.
- Includes capital expenditure; expenditure of funds raised through fees or obtained from church or parish grants; either expenditure on, or allowance for, superannuation and long service leave; Commonwealth and State grants for education and payments to staff of salary-related allowances, including motor vehicle allowances.
- Expenditure of system offices is allocated across the schools in proportion to enrolments.
- Where figures have been rounded, discrepancies may occur between the sums of components items and totals.

Source: DETYA

## Recurrent funding

**Table 34 State government per capita grants to non-government schools, by category, Australia, 2000 (\$)**

C'wealth funding category	NSW <sup>(a)</sup>	Vic. <sup>(b)</sup>	WA <sup>(c)</sup>	ACT <sup>(d)</sup>	Rates for other States
<b>Primary</b>					<b>Tasmania<sup>(e)</sup></b>
1	385	312/373	852	266	Primary 1,024
2	530	434	852	354	Junior secondary 1,331
3	638	559	852	439	Senior secondary 1,792
4	753	600	936	534	<b>Northern Territory</b>
5	801	602	936	619	Primary 1,251
6	847	626	968	684	Secondary 1,817
7	894	629	968	752	<b>South Australia<sup>(f)</sup></b>
8	941	650	1,014	824	Primary 397
9	988	714	1,014	880	Secondary 552
10	1,036	719	1,058	935	<b>Queensland<sup>(g)</sup></b>
11	1,082	724	1,058	991	Primary 702
12	1,232	726	1,092	1,050	Secondary 1,074
<b>Secondary</b>					
1	562	458/547	1,296	420	
2	779	641	1,296	555	
3	931	824	1,296	643	
4	1,102	946	1,516	839	
5	1,171	948	1,516	897	
6	1,240	986	1,596	997	
7	1,309	990	1,596	1,097	
8	1,378	1,023	1,666	1,205	
9	1,446	1,123	1,666	1,288	
10	1,515	1,125	1,722	1,364	
11	1,584	1,128	1,722	1,446	
12	1,710	1,130	1,784	1,532	

Note: All amounts rounded to the nearest dollar. Rates are expressed in 1999 prices. Rates for some States may be subject to cost supplementation.

- (a) Calendar year figures for NSW are calculated by adding two payments which are made each half-year for each category, each payment falling in a different financial year. Special schools and children with disabilities (in terms of the Commonwealth's definition) are paid category 12 rates.
- (b) Victoria splits category 1 into 1A and 1B for schools with an Education Resources Index (ERI) over 100. In addition, the Victorian government committed \$57.5 million over 4 years (1999–2000 to 2002–03) to support needy non-government schools to achieve outcomes in key areas such as reduced class sizes, literacy and numeracy, and assistance to students with special learning needs. In 2000, \$10 million was distributed on a per capita basis to schools in ERI categories 8–12.
- (c) Includes pre-primary rates of \$852 (cat. 1–3), \$936 (cat. 4–5), \$968 (cat. 6–7), \$1,014 (cat. 8–9), \$1,058 (cat. 10–11) and \$1,092 (cat. 12), for each full-time equivalent student.
- (d) ACT figures represent the average of two distinct half-yearly payments, across financial years 1999–2000 and 2000–01.
- (e) Tasmanian figures represent the average level of funding per student per sector. The total paid is comprised of a needs and a per capita component.
- (f) SA also pays a needs component, which comprises 52.5 per cent of total grants available in 2000. Total amount of needs component is distributed among schools, using 35 per cent allocation according to a number of needs of schools and 65 per cent allocation according to a number of needs of students following distribution of per capita funding entitlements.
- (g) In addition to these rates, Queensland pays a needs component constituting 22.5 per cent of the total grants available in 2000. The total needs component is disbursed according to school needs (80 per cent) and student needs (20 per cent). For new schools opening in 2000, the 'needs components' were \$222 per primary student and \$333 per secondary student. In their first year of funding, new schools are assumed to have 'average needs'.

Source: State departments of education

**Table 35 Commonwealth per capita grants to government and non-government schools, by level of education and Commonwealth funding category, Australia, selected years (\$ estimated at final 2000 prices)**

	Primary		Secondary	
Government	1993	2000	1993	2000
	450	450	664	664
Non-government				
Category 1	595	595	943	943
Category 2	794	794	1,251	1,251
Category 3	993	993	1,450	1,450
Category 4	1,208	1,208	1,901	1,901
Category 5	1,398	1,468	2,035	2,131
Category 6	1,552	1,618	2,261	2,361
Category 7	1,706	1,772	2,487	2,588
Category 8	1,870	1,955	2,735	2,858
Category 9	1,996	2,212	2,923	3,234
Category 10	2,122	2,402	3,098	3,509
Category 11	2,252	2,608	3,285	3,807
Category 12	2,383	2,832	3,481	4,135

Source: Commonwealth DETYA

## Capital funding

**Table 36** Capital expenditure by State governments in government schools, 1999–2000 (\$ million)

New South Wales	191.4
Victoria	161.4
Queensland	221.4
South Australia	36.3
Western Australia	162.8
Tasmania	11.5
Northern Territory	9.3
Australian Capital Territory	9.0

Source: MCEETYA, *National Schools Statistics Collection*, 2000

**Table 37 Summary of Commonwealth capital expenditure, all schools, 2000 (\$m) (a)**

New South Wales	104.0
Victoria	75.7
Queensland	56.5
South Australia	23.9
Western Australia	30.6
Tasmania	8.3
Northern Territory	3.5
Australian Capital Territory	5.9
<b>Sub-total</b>	<b>308.4</b>
National survey of non-government schools infrastructure	1.2
<b>TOTAL</b>	<b>309.6</b>

(a) Does not include capital funding provided under the Special Education Non-government Capital Support Element.

Source: Commonwealth DETYA



# Equity

**Table 38** Year 12 completion rates<sup>(a)</sup> by locality<sup>(b)</sup> and gender, by State, 2000 (per cent)

	Urban			Rural centres			Other rural and remote areas			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
New South Wales	61	72	67	53	66	59	55	76	65	59	72	65
Victoria	63	76	69	55	72	63	54	80	66	61	76	68
Queensland	69	76	73	66	74	70	66	84	74	68	77	73
South Australia	62	79	70	44	62	53	53	83	67	59	78	68
Western Australia	61	69	65	53	61	57	46	65	55	57	68	63
Tasmania	79	88	83	67	80	73	52	71	61	68	81	74
Northern Territory	30	51	40	(c)	(c)	(c)	17	21	19	23	35	28
Australian Capital Territory	77	85	81	(d)	(d)	(d)	(d)	(d)	(d)	77	85	81
Australia	63	74	69	58	70	64	55	76	65	61	74	67

- (a) These figures are estimates only. They express the number of year 12 completions (year 12 certificates issued by State education authorities) as a proportion of the estimated population that could attend year 12 in that calendar year. It is important to note that there are variations in assessment, reporting and certification methods for year 12 across States and Territories.
- (b) Definitions of 'Urban', 'Rural centres' and 'Other rural and remote areas' are based on the Department of Primary Industries and Energy classification. Note that categories in this table differ from those in Table 39.
- (c) There are no 'Rural centres' in the Northern Territory.
- (d) All of the ACT is defined as 'Urban'.

Source: DETYA, derived from data supplied by State secondary accreditation authorities and the ABS

**Table 39 Year 12 completion rates<sup>(a)</sup> by locality<sup>(b)</sup> and gender, Australia, 1994–2000 (per cent)**

Year	Urban			Rural			Remote <sup>(c)</sup>			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
1994	66	76	71	57	71	64	51	65	58	63	74	68
1995	64	75	69	54	70	62	46	59	52	61	73	67
1996	62	72	67	54	71	62	45	64	54	60	72	65
1997	61	71	66	54	70	62	43	62	51	58	71	64
1998	62	73	67	55	71	63	48	61	54	60	72	66
1999	63	74	68	57	73	64	45	69	56	61	74	67
2000	63	74	69	57	74	65	47	64	55	61	74	67

- (a) These figures are estimates only. They express the number of year 12 completions (year 12 certificates issued by State education authorities) as a proportion of the estimated population that could attend year 12 in that calendar year. It is important to note that there are variations in assessment, reporting and certification methods for year 12 across States and Territories
- (b) Definitions of 'Urban', 'Rural' and 'Remote' are based on the Rural, Remote and Metropolitan Areas Classification developed by Department of Primary Industries and Energy.  
'Urban' includes Darwin, Townsville/Thuringowa and Queanbeyan.  
In this table, the 'Rural' group comprises rural centres and other rural areas, and 'Remote' comprises remote centres and other remote areas.
- (c) 'Remote' comprises approximately 3 per cent of the 15–19-year-old population in 2000 and, as a result, relatively small changes in the estimated resident population or in the number of completions annually can lead to apparent substantial changes in the completion rates from year to year.

Source: DETYA, derived from data supplied by State secondary accreditation authorities and the ABS

**Table 40 Year 12 completion rates<sup>(a)</sup> by socioeconomic status<sup>(b)</sup> and gender, by State, 2000 (per cent)**

State	Low socioeconomic status deciles			High socioeconomic status deciles			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
New South Wales	53	69	61	71	83	77	59	72	65
Victoria	54	71	62	71	82	76	61	76	68
Queensland	63	77	70	78	79	78	68	77	73
South Australia	48	68	58	77	93	85	59	78	68
Western Australia	45	54	50	74	82	78	57	68	63
Tasmania	58	69	63	90	99	95	68	81	74
Northern Territory	11	16	14	(d)	(d)	(d)	22	35	28
Australian Capital Territory	(c)	(c)	(c)	78	86	82	77	85	81
Australia	54	69	61	73	83	78	61	74	67

- (a) These figures are estimates only. They express the number of year 12 completions (year 12 certificates issued by State education authorities) as a proportion of the estimated population that could attend year 12 in that calendar year. It is important to note that there are variations in assessment, reporting and certification methods for year 12 across States and Territories.
- (b) The ABS's Index of Relative Socio-Economic Disadvantage (IRSED) has been used to calculate socioeconomic status (SES) on the basis of postcode of students' home addresses. 'Low' SES is the average of the lowest three deciles and 'high' is the average of the top three deciles.
- (c) On the basis of this index, the Australian Capital Territory has no low SES deciles.
- (d) Small increases in the estimated resident population can cause significant fluctuations in the data. Because of this, high SES rates for the Northern Territory are unreliable and have therefore not been included.

Source: DETYA, derived from data supplied by State secondary accreditation authorities and the ABS

**Table 41 Year 12 completion rates<sup>(a)</sup> by socioeconomic status<sup>(b)</sup> and gender, 1994–2000 (per cent)**

	Low socioeconomic status deciles			High socioeconomic status deciles			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
1994	55	66	60	74	85	79	63	74	68
1995	53	65	59	73	83	78	61	73	67
1996 <sup>(c)</sup>	50	62	56	71	82	76	59	71	65
1996 <sup>(d)</sup>	52	67	59	72	80	76	60	72	65
1997	51	66	58	71	80	75	58	71	64
1998	53	67	60	72	81	76	60	72	66
1999	53	68	61	73	83	77	61	74	67
2000	54	69	61	73	83	78	61	74	67

(a) These figures are estimates only. They express the number of year 12 completions (year 12 certificates issued by State education authorities) as a proportion of the estimated population that could attend year 12 in that calendar year.

(b) The ABS's Index of Relative Socio-Economic Disadvantage (IRSED) has been used to calculate SES on the basis of postcode of students' home addresses. 'Low' SES is the average of the lowest three deciles and 'high' is the average of the top three SES deciles.

(c) These 1996 figures have been calculated using SES deciles derived from the 1991 Census.

(d) These 1996 figures have been recalculated using SES deciles derived from the 1996 Census.

Note: SES deciles are derived using the ABS Socio-Economic Indexes for Areas (SEIFA), which have been produced from Census data. In 1998 these indices were updated by the ABS using 1996 Census data. DETYA has recalculated the 1996 completions using the updated index.

The line indicates a break in the series. It results from the differences in the IRSED indices based on the 1991 Census and the 1996 Census respectively.

Comparisons are best made in the inter-censal period.

Source: DETYA, derived from data supplied by State secondary accreditation authorities and the ABS

# Appendix 2

## Publications

### New South Wales

#### Board of Studies

In 2000, the Board of Studies produced a number of significant documents of wide interest to teachers, students, parents and employers. All key Board publications can be accessed on the Board of Studies website at <http://www.boardofstudies.nsw.edu.au> under the headings listed. Policy and planning documents appear in the Reading Room, while specific interest documents can be found on the K–6 Page and the Parents Page. Other headings allow you to access HSC 2001 syllabuses, past HSC exam papers, all NSW syllabuses, and publications related to the School Certificate and Higher School Certificate.

#### Department of Education and Training

The Department produces a wide range of pamphlets, books, periodicals, CD-ROMs and audiovisual materials. Some examples of materials produced during 2000 are:

*2000 TAFE NSW Handbook*

*Aboriginal Programs' Reconciliation Calendar*

*Apprenticeships in NSW: Everything You Need to Know About Apprenticeships and Traineeships in NSW*, Year 2000 edition

*Assisting students who need additional support: evaluating software and Internet sites: part of linkages*

*Caring for Animals*

*Curriculum Support for Teaching* (9 titles)

Department of Education and Training Annual Report 2000 [http://www.det.nsw.edu.au/reports\\_stats/annual\\_reports/report2000.htm](http://www.det.nsw.edu.au/reports_stats/annual_reports/report2000.htm)

*Inform*

*Leading and Managing the School: a statement of key accountabilities for principals in the effective educational leadership and management of NSW government schools*

*New Horizons: A Plan to Improve Education and Training on the Northern Beaches*

*New Horizons: Newcastle*

*Parents' Guide to Schools*

Programs for history and geography

#### Catholic Education Commission

In 2000, Diocesan Catholic Education Offices did not produce major publications other than systemic policies and strategic plans, curriculum support materials, research reports and administrative bulletins related to the needs of school communities.

Representatives from all dioceses worked through the Catholic Education Commission, NSW in responding to major State and Commonwealth reports, discussion papers and similar documents.

### Victoria

*A–Z Guide*

*Books for Kids: A Guide for Parents*

*Department of Education, Employment and Training Annual Report 1999–2000*

*Discussion Paper: Principles of Public Education*

*Drug Legal Issues for Schools: A Guide for Principals of Government Schools*

*ESL Stage A1*

*Framework for Student Support Services*

*Guidelines for Reviewing Drug Education in Victorian Schools*

*Homework Habit Guidelines*  
*Keeping Kids at School*  
*Linking LOTE to Early Years Program*  
*LOTE in Government Schools*  
*Measuring Academic Progress Against Each KLA: Students with Disabilities and Impairments*  
*Merit Protection Board*  
*Merit Protection Board Teaching Information Service*  
*Middle Years Matters: Transition: A Process Not an Event*  
*Middle Years Successful Intervention Literacy Research Project*  
*No English, Don't Panic: a handbook for teachers of English as a second language learners in their first few weeks at school in Australia (2000 revised edition)*  
*Planning for People Professional Development Kit*  
*Prep-Year 10 Benchmarks*  
*Public Education: The Next Generation*  
*Report on the Accreditation of After Hours Ethnic Schools*  
*Safety Internet*  
*School Bus Review*  
*School Management Benchmarks 1999*  
*Stages of Schooling*  
*The Middle Years: A Guide for Strategic Action Years 5-9*  
*The School Based Teaching Experience*  
*The Step into Prep: A Guide for Parents*  
*Understanding Organisational Health*  
*VCE Benchmarks 1999*  
*VET: Class of 97 Two Years Out*  
*VET: Implementing Part-time Apprenticeships for School Students*  
*VET: Implementing Part-time New Apprenticeships for School Students*  
*VET in Schools Cohort*  
*Victorian Multiaging Resources*

## Queensland

### Government sector

*Budget Highlights*  
*Education Queensland Annual Report 1999-2000 Vol I & II*  
*Education Queensland Annual Report 2000-2001*  
*Indigenous Education Consultative Body (IECB) Profile*  
*Indigenous Education Consultative Body (IECB) Work Plan*  
*Literate Futures: Teacher Summary*  
*Strategic Plan: General Summary*  
*Strategic Plan: Teacher Summary*

## Catholic sector

*Catholic School Renewal: A Quality Assurance Program for Catholic Schools in the Diocese of Rockhampton*, 1999, Catholic Education Office, Diocese of Rockhampton

*Health and Physical Education: Information for Parents*, 1999, Catholic Education Office, Archdiocese of Brisbane

## South Australia

### Department of Education, Training and Employment

*Aboriginal Voices: Activities and Resources for English: Perspectives of Aboriginal Peoples and Torres Strait Islander Peoples*

*Consistency of Teacher Judgement: A Training and Development CD-ROM for Teachers* (in collaboration with the Victorian Department of Education, Employment and Training and the Queensland School Curriculum Council)

*Countering Racism: Using a Critical Approach in Teaching and Learning Contexts to Explore Portrayals of Aboriginality*

*Department of Education, Training and Employment Annual Report 2000*

[http://www.decs.sa.gov.au/policy/files/links/DETE\\_AnnualReport\\_2000.pdf](http://www.decs.sa.gov.au/policy/files/links/DETE_AnnualReport_2000.pdf)

*Department of Education, Training and Employment Strategic Plan 2000–2003*

[http://www.decs.sa.gov.au/policy/files/links/strategic\\_Plan.pdf](http://www.decs.sa.gov.au/policy/files/links/strategic_Plan.pdf)

*Partnerships 21: Departmental Response to the Recommendations of the Partnerships 21 Policy Shaping Groups* [http://www.dete.sa.gov.au/partnerships21/files/links/Dept\\_response\\_to\\_recommend.pdf](http://www.dete.sa.gov.au/partnerships21/files/links/Dept_response_to_recommend.pdf)

*Partnerships 21: From Plans into Practice: The First Six Months: Perspectives of Partnerships 21 Schools and Preschools*

*Partnerships 21: Shaping the Future through Partnerships Plans*

*Performance Management Guidelines*

*Performance Management Policy*

*Social Action through Literacy: Early to Primary Years* (with University of South Australia)

*South Australian Curriculum Standards and Accountability (SACSA) Framework – Trialing draft*

### South Australia Association of Independent Schools

*Linking Literacy with Studies of Asia*, edited by Suzanne Bradshaw, Joelle Hancock and Deirdre Travers, SA Independent Schools Targeted Programs

*School Entry Assessment: Numeracy Resource Folder* (companion to the *School Entry Assessment: Literacy Resource Folder*), SA Independent Schools Targeted Programs

*Supporting Enjoyable and Successful Reading for Early Years* (video), SA Independent Schools Targeted Programs

## Western Australia

### Government sector

*Conducting an Investigation or Inquiry into a Suspected Breach of Discipline: Crisis Management Guidelines*

*Deadly Ideas*

*Deadly Yarns*

*Department of Education Annual Report 2000* <http://www.eddept.wa.edu.au/AnnualReport/>

*Discipline Policy, Procedures and Guidelines*



*Equal Employment Opportunity Diversity Management Plan*  
*Graduate Supply Trends: Occasional Paper*  
*GST Manual*  
*Legislative Responsibilities and Information for Principals, Line Managers and Employees*  
*Managing Unsatisfactory and Substandard Performance of Teaching Staff and School Administrators: Policies and Procedures*  
*Monitoring Standards in Education, Health and Physical Education Report*  
*Monitoring Standards in Education, Mathematics Summary Report*  
*Preparing a Teaching Portfolio*  
*Reporting Requirements for Schools in 2001*  
*Reporting Requirements for Schools in 2000*  
*Risk Management Plan 2000*  
*School Leadership for the Future*  
*Secondary School Facilities Planning Guide*  
*Security Manual*  
*Sharing Ideas that Support Aboriginal Children's Learning*  
*Starting Out as a Teaching Professional*  
*Statistics 2000 for Western Australian Schools*  
*Technology 2000 School Computer Census*  
*Technology 2000 Summary of Results Teacher Survey*  
*VET in Schools Review of Vocational Education and Training in Schools 1999*

## Catholic sector

*Annual Reports 1999 and 2000 Catholic Education Office WA*  
*Camps and Excursions Policy Manual*  
*Catholic Education Circular (8 editions)*  
*Directory of Schools in WA*  
*Kalgoorlie Goldfields Teachers' Promotional Brochure*  
*Library Catalogue*  
*Mapping Your Future (Booklet)*  
*Noongar Kit (an Aboriginal Resource Package for schools)*  
*Our Schools (2 editions)*  
*School Board Constitution*  
*Surviving the Selection Process (Booklet)*  
*Wajarri Language Kit (Geraldton)*

## Independent schools

*Annual Report*  
*Audit of the Aboriginal Independent Community Schools*  
*AISWATCH (3 editions)*  
*Talk, Play, Learn – a Literacy Week Publication in English and Community Languages*

## Tasmania

*Department of Education Annual Report 2000–2001* <http://www.education.tas.gov.au/annualreport/00-01/>

*Framework for Inclusion*

*Indicators of Development: Birth to 4*

*Learning Together*

*School Improvement Review* (Booklet)

*Tasmanian Literacy Outcomes* (Booklet and its supporting document)

*Working with TLOs*

Website publications <http://www2.education.tas.gov.au/>

## Northern Territory

*Behaviour Management Framework* (Handbook)

*Department of Education Annual Report 2000–2001* [http://www.education.nt.gov.au/about\\_us.shtml](http://www.education.nt.gov.au/about_us.shtml)

*ESL Framework of Stages*

*ESL Framework of Stages* (Handbook)

*Final Evaluation Report: Early Intervention Project*

*From Contract to Completion* (Handbook)

*Guidelines for the Workplace Induction, Support & Supervision of Temporary Teachers 2000* (Handbook)

*Internet Insights for Teachers* (Handbook)

*Internet Insights for Teachers* (Version 2)

*Learning Area Statement: English T–10*

*Learning Area Statement: Maths T–10*

*Learning Lessons Report: An Independent Review into Aboriginal Education in the NT*

*Literacy and Numeracy Life Skills Programs* (Henbury School) (Handbook)

*Literacy Professional Elaborations for Year 7 – Numeracy Professional Elaborations for Years 3, 5 and 7*

*Multilevel Assessment Program 2000 – Guidelines for Administration*

*NT Curriculum Framework Options Pack*

*Occupational Health and Safety Management Guidelines* (Handbook)

*Probation Assessment* (Handbook)

*Senior Secondary Course 2001* (Handbook)

*Student Services Review* (Handbook)

*Teachers of Exemplary Practice* (Handbook)

*Teachers of Exemplary Practice 2000* (Handbook)

*VET in Schools* (Brochure)

## Australian Capital Territory

### Government sector

*2000 Languages other than English (LOTE) Survey Bulletin*

*ACT Board of Senior Secondary Studies Year 12 Study 2000*

*ACT Government School Education, Literacy and Numeracy, Performance Report 1999*  
*Department of Education and Community Services Annual Report, 1999–2000*  
 Indigenous education six-monthly report to 28 February 2001, Report to the ACT Legislative Assembly  
*Policy and Procedures Manual 2001*  
*Framework to Expand Vocational Programs to Students in ACT Government Secondary Colleges through partnership with Canberra Institute of Technology*  
*Government School Bulletin August 2000 Census*  
*Government School Bulletin February 2000 Census*  
*School Development and College Review Report 2000*  
*Strengthening Partnerships Kit* by Glenda Shopen and Anthony Liddicoat as part of the Supportive Practices for Enhancing Literacy Learning (SPELL) Project for the ACT Department of Education and Community Services, in October 2000

## Catholic sector

*1999 Annual Report*, Archdiocese of Canberra and Goulburn  
*Early Career Teachers Handbook*, Catholic Education Office  
*School Review and Development Manual*, Archdiocese of Canberra and Goulburn  
*Treasures New and Old: Religious Education Core Curriculum Guidelines Document for Years K–12*, Archdiocese of Canberra and Goulburn

## Commonwealth

*Best Practice in Reporting on Student and School Achievement – Information for Parents*, Canberra 2000, Quality Schooling Branch, DETYA <http://www.detya.gov.au/schools/publications/2000/parents.htm>  
*Best Practice in Reporting on Student and School Achievement – Information for Teachers*, Quality Schooling Branch, DETYA <http://www.detya.gov.au/schools/publications/2000/teachers.htm>  
*Bullying: Information for Parents*, Quality Schooling Branch, DETYA <http://www.detya.gov.au/schools/publications/2000/bullying.htm>  
*DETYA Annual Report 1999–2000* [http://www.detya.gov.au/directory/publications/annual\\_reports.htm](http://www.detya.gov.au/directory/publications/annual_reports.htm)  
*The Future of the Past – The National Inquiry into School History*, Tony Taylor, et al., Quality Schooling Branch, DETYA <http://www.detya.gov.au/schools/publications/2000/future/report.htm>  
*IESIP Provider Administrative Guidelines 2001–2004*, Parts 1 and 2, Indigenous Education Branch, DETYA <http://www.detya.gov.au/schools/guidelines/index.htm>  
*Information for Parents on the National School Drug Education Strategy 2000*, DETYA <http://www.detya.gov.au/schools/publications/2000/drugs/flyer.htm>  
*Issues Paper on Assessment and Reporting of Student Achievement for Students with Specific Education Needs against Literacy and Numeracy Benchmarks*, Australian Council for Educational Research, 1999 <http://www.detya.gov.au/schools/publications/2000/index.htm>  
*The Literacy, Numeracy and Students with Disabilities Project*, Schonell Special Education Research Centre, University of Queensland; Department of Special Education and Disability, University of South Australia; the Deafness Student Learning Centre, University of Melbourne; and DETYA <http://www.detya.gov.au/schools/publications/2000/index.htm>  
*Mapping the Territory, Primary Students with Learning Difficulties: Literacy and Numeracy*, Edith Cowan University; University of Newcastle; University of Melbourne; and DETYA <http://www.detya.gov.au/schools/publications/2000/index.htm>  
*National Framework for Protocols for Managing the Possession, use and/or Distribution of Illicit and other Unsanctioned Drugs in Schools*, DETYA <http://www.detya.gov.au/schools/publications/2000/drugs/protocols.htm>  
*Non-completion of School in Australia: The Changing Patterns of Participation and Outcomes* (LSAY Research Report No. 16), Stephen Lamb, Peter Dwyer and Johanna Wyn, Australian Council for Educational Research <http://www.acer.edu.au>

*Numeracy, A Priority for All: Challenges for Australian Schools*, DETYA <http://www.detya.gov.au/schools/publications/2000/index.htm>

*Patterns of Participation in Year 12 and Higher Education in Australia: Trends and Issues* (LSAY Research Report No. 17), Gary N. Marks, Nicole Fleming, Michael Long and Julie McMillan, Australian Council for Educational Research <http://www.acer.edu.au>

*Reporting on Student and School Achievement*, Peter Cuttance and Shirley Stokes, DETYA <http://www.detya.gov.au/schools/publications/2000/cuttance/htm>

*School Insight*, Schools Division, DETYA <http://www.detya.gov.au/schools/publications/insight/index.htm>

*Students with Disabilities: Their Literacy and Numeracy Learning*, DETYA <http://www.detya.gov.au/schools/publications/2000/index.htm>

*Subject Choice by Students in Year 12 in Australian Secondary Schools* (LSAY Research Report No. 15), Sue Fullarton and John Ainley, Australian Council for Educational Research <http://www.acer.edu.au>

*Teachers for the 21st Century; Making a Difference*, Quality Schooling Branch, DETYA <http://www.detya.gov.au/schools/publications/index.htm>

*'What Works?' Explorations in Improving Outcomes for Indigenous Students*, David McRae, et al., DETYA <http://www.acsa.edu.au/indigenous/>



# Appendix 3

## Explanatory notes

### New South Wales

Exemption from Testing Policy	Students may be exempted from the test if, in consultation with parents, the school believes that participation in the test will be detrimental to the student. Reasons for exemption include: students from a non-English speaking background who have been enrolled in an English-speaking school for less than 12 months; students with high support needs; students with a medical condition that would affect well-being and test performance; students attending Stewart House on the test day; students attending Schools for Specific Purposes. (Note: as these students are ungraded, the age distribution of year 3–5 students doing the tests was used to estimate the notional number of year 3–5 students in these schools.)
Average Age Calculation Method	Average age at time of testing was determined from NSW Department of Education birth date data for government school years 3 and 5 students.
Years at School Calculation Method	Most year 3–5 students in NSW have completed 3–5 full years of schooling prior to the tests being held at the beginning of August. Years at school were thus taken to be 3 years, 7 months for year 3 students and 5 years, 7 months for year 5 students.
Definition, Identification of Indigenous Students	Indigenous students are those who answered 'Yes' to the question: 'Are you an Aboriginal or Torres Strait Islander person?'.
Definition, Identification of LBOTE Students	LBOTE students are those who answered 'Yes' to the question: 'Does anyone speak a language other than English in your home?'.

### Victoria

Exemption from Testing Policy	The principal may grant an exemption to students with disabilities and impairments and to students who have been learning English in Australia for less than two years. The decision is made at the school level. The principal should consult specialist staff and ensure that parents sign a document agreeing to the exemption.
Average Age Calculation Method	Students provide date of birth on test task books. Average age is calculated at August 2000 (or at August 1999 for the 1999 data) by using the month and year of birth and averaging the age of all students who participated in the test.
Years at School Calculation Method	Students commence schooling in the Preparatory year and the year of schooling is calculated as the 3 or 5 years from Prep to the beginning of year 3 or 5, and 7 months to the beginning of August to when testing takes place.
Definition, Identification of Indigenous Students	Schools were asked to answer the following question: 'Is the student Aboriginal or a Torres Strait Islander?' on the front page of each student's test booklet. Students are identified as Indigenous on enrolment forms at the commencement of school.
Definition, Identification of LBOTE Students	Schools were asked to answer the following question: 'Is this student of non-English speaking background?' on the front page of each student's test booklet. The generally accepted definition of a LBOTE student is one where the student or either parent was born in a non-English speaking country or has a home language other than English.

### Queensland

Exemption from Testing Policy	The following students may be exempted: students for whom English is not their first language and who are assessed by their English as a Second Language (ESL) teacher and/or classroom teacher as achieving at or below Level 2 using the Draft Queensland ESL Proficiency Levels or Reading Level 3 and Writing Level 3 of the National Languages and Literacy Institute of Australia (NLLIA) ESL Band Scales; or those with intellectual impairment who have been identified as having educational needs at levels 5 or 6 through the systemic ascertainment process.
Average Age Calculation Method	The average ages are calculated on age distributions of the populations of years 3 and 5 students attending government and non-government schools based on 1 July census enrolment data, published in ABS, Cat. No. 4221.0, <i>Schools Australia, 2000</i> .
Years at School Calculation Method	Compulsory schooling commences at year 1. Students sat the test in late August. Year 3 students who sat the test would typically have been at school for 2 years and 8 months. Year 5 students typically have been at school for 4 years and 8 months.
Definition, Identification of Indigenous Students	Students self-identify that they are Indigenous by answering 'Yes' to either or both the questions: 'Are you an Aboriginal person?' or 'Are you a Torres Strait Islander person?'. Teachers are required to check the accuracy of the students' responses.
Definition, Identification of LBOTE Students	LBOTE students are those who answer 'Yes' to the question: 'At home, do either of your parents/care-givers speak a language other than English MOST of the time?' and who are not classified as Indigenous. Students self-identify and teachers are required to check the accuracy of the students' responses.

### South Australia

Exemption from Testing Policy	A student may be exempted from the testing program by the school principal in consultation with the parent/care-giver. Reasons for exemptions include: students from a non-English speaking background who have been enrolled in an English-speaking school for less than 12 months; students with high support needs who would not be able to read the test.
Average Age Calculation Method	The average age of students at the time of testing is estimated from student enrolment information which schools collect.
Years at School Calculation Method	A student may begin school once they turn 5 years of age. Most students will spend between 10 and 13 terms in junior primary school classes (ie Reception, and years 1 and 2).
Definition, Identification of Indigenous Students	Indigenous students were identified through their response to a question on the test cover asking if they were an Aboriginal or Torres Strait Islander person.
Definition, Identification of LBOTE Students	LBOTE students were identified through their response to a question on the test cover asking if a language other than English is spoken in their home.

## Western Australia

Exemption from Testing Policy	Exemptions may be granted by the principal with the signed agreement of parent/care-givers on the following grounds: temporary or permanent disability or impairment; enrolment in specified intensive language centres; ESL students in mainstream classes who have been in Australia for one year or less.
Average Age Calculation Method	Students provide date of birth on test booklets. Average age was calculated at the week of testing on the basis of this information.
Years at School Calculation Method	The figure given is an estimate based on the assumptions of: (a) continuous attendance of students in all years of schooling; (b) an equal number of students skipping a year of studies and repeating a year of studies; and (c) that for these cohorts of year 3 and 5 students the pre-primary year was neither full-time nor compulsory and is therefore not included in the calculation.
Definition, Identification of Indigenous Students	Indigenous students were identified through their 'Yes' response to the question: 'Are you an Aboriginal or Torres Strait Islander person?'. This question was included on the front of the student answer booklet.
Definition, Identification of LBOTE Students	Students from a language background other than English were identified by analysing their responses to the following questions: 'Are you an Aboriginal or Torres Strait Islander person?' 'Does anyone in your home usually speak in a language other than English?'.

## Tasmania

Exemption from Testing Policy	Principals of government schools were able to exempt students on the following grounds: Category A students on the Department's intellectual disabilities register; and ESL students who the Principal Education Officer (ESL) identified as being unable to complete the test owing to the students' inability to comprehend English. Students in Catholic and independent schools were exempted at their principal's discretion, under strict guidelines established by each sector.
Average Age Calculation Method	The average age of government and Catholic school students was calculated from date-of-birth records held in the database of each sector. The average age of independent school students was provided by ACER. The average age reported is a weighted average for all three sectors.
Years at School Calculation Method	In Tasmania, most students enrol in Kindergarten for half a day per day, but compulsory schooling begins in Prep, followed by years 1, 2, 3 etc. Thus, the average number of years of compulsory schooling at the time of testing was approximately 3 years, 8 months (year 3) and 5 years, 8 months (year 5). Testing for government and Catholic school students occurred in late August of 2000, whereas in 1999 it occurred in early August (hence the one-month difference for the two years).
Definition, Identification of Indigenous Students	Indigenous students were identified by each school from information collected at enrolment, or through self-identification. If the Indigenous status was unknown, the student was not considered to be Indigenous.
Definition, Identification of LBOTE Students	Government schools identified LBOTE students from enrolment records and Catholic schools used new-arrival and special education applications to identify LBOTE students. Independent schools used self-identification. If the LBOTE status of a student was unknown, that student was considered not to have had a language background other than English.

## Northern Territory

Exemption from Testing Policy	A student is considered to be exempt from the reading test if they are unable to attempt, with teacher support, all questions at Pre-Level 2 in the reading test. Students are exempted from the mathematics test if they are unable to attempt any questions at Level 1 in the mathematics test.
Average Age Calculation Method	The date of birth of each student is recorded on the test cover. The age of the student relative to the official end of the testing period is then calculated as a decimal. The average age of all students in the cohort (eg year 3) is then calculated.
Years at School Calculation Method	Schooling begins at age 5 in Transition classes. The typical time in school for year 3 students was calculated as follows: 2 years, 8 months (years 1, 2 and 3 to time of testing) plus 7 months (Transition) equals 3 years, 3 months. For year 5 students, the calculation was as follows: 4 years, 8 months (years 1, 2, 3, 4 and 5 at time of testing) plus 7 months (Transition), equals 5 years and 3 months.
Definition, Identification of Indigenous Students	Indigenous students are identified by schools at the time of enrolment or by self-identification.
Definition, Identification of LBOTE Students	For reading, data represent students identified by teachers as being eligible for inclusion in the ESL program. For numeracy, if a student answers 'Yes' to the question, 'Does anyone use a language other than English in your home?' or answers 'Never/Sometimes' to the question, 'How often do you speak English in your home?', then they are considered to be a LBOTE student.

## Australian Capital Territory

Exemption from Testing Policy	Exempt students include mainstream ESL students who have been learning English in Australia for less than 2 years; students enrolled in Introductory English Centres; students enrolled in Learning Support Centres and Units; students with diagnosed communication disorders; mainstream students who have a temporary physical disability at the time of the assessments.
Average Age Calculation Method	From date of birth until August 1, year 3 or year 5, calculated through the MAZE student record-keeping system.
Years at School Calculation Method	The years and months beginning February 1 in the Kindergarten year through to August 1, in year 3 or 5.
Definition, Identification of Indigenous Students	Indigenous students are identified at the time of enrolment by the parents/care-givers.
Definition, Identification of LBOTE Students	Data represent funded ESL students rather than the broader LBOTE category.



## Appendix 4

# Measurement issues

## Introduction

In 1999, Australia's ministers of education agreed to the National Goals for Schooling in the Twenty-first Century and affirmed their commitment to national reporting of progress towards the achievement of these goals. In order to focus the scope and nature of the reporting, ministers identified a number of priority areas in the first instance.

In each of the priority areas, considerable advances have been made towards the identification of key performance measures that accurately portray progress towards the achievement of the goals. As the key performance measures are identified, procedures are put in place to measure performance in a manner that produces nationally comparable outcomes. The outcomes are then reported in this publication.

The task of identifying appropriate performance measures is being undertaken by the National Education Performance Monitoring Taskforce (NEPMT). The measurement and compilation of results is the responsibility of the various jurisdictions, with assistance from national bodies such as the VET in Schools Taskforce, the Benchmarking Taskforce and the Australian Bureau of Statistics (ABS).

As this work has proceeded, a number of issues relating to the identification, measurement and presentation of data have emerged. This section presents a summary of the issues which are currently being considered.

## Issues

### Ethical principles underpinning reporting

The performance information that is collected and published has the potential to affect greatly the public perception of school education as well as to influence the decision-making for government and non-government schools. It is essential, therefore, that the presentation of this information is underpinned by a clear set of ethical principles. During 2000, this matter was considered by one of the NEPMT working groups, which proposed that the fundamental ethical principle should be 'truth in reporting'.

Such a principle requires that the information reported should be accurate and comprehensive, reporting should not be

selective or partial, and all relevant information should be reported. This principle should also be followed when data are presented in graphical and tabular forms.

Two other supporting ethical principles were proposed:

- the community's right to information
- the avoidance of unwarranted harm to members of the community.

The first of these is based on the assumption that the public has the right to access information that has been collected by government for public purposes. However, this principle has to be considered in the light of the second, which acknowledges that, because of the potential for harm to occur to individuals and institutions, there can be no absolute right of publication. Further work on the principles is expected to take place to 2001.

### Ensuring privacy

Most jurisdictions have in place legislation covering privacy and/or freedom of information. Typically, this legislation refers to matters such as the collection of personal information, solicitation of information, its storage and security as well as access to the information. The *National Report on Schooling in Australia* operates within these provisions and also acknowledges that some jurisdictions have agreements with particular organisations and sections of the community that need to be respected. The over-riding protocol being observed is that no information should be reported that allows the identification of individual students or schools.

Where information is provided about individual schools, teachers or students (for example, in some case studies) appropriate approvals are sought prior to publication.

### Selection and reporting of performance measures

The Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) has defined key performance measures as:

A set of measures, limited in number and strategic in orientation, that provides nationally comparable data on aspects of performance critical to the monitoring of progress against the National Goals for Schooling in the Twenty-first Century.

Initial efforts to develop such data have focused on the more measurable aspects of students' performance. However, it is expected that performance measures will eventually be developed to cover the broad range of educational outcomes, even though this might be conceptually and operationally more difficult in some areas. Some general issues surrounding the reporting of performance measures include the following:

- Time-series data are preferable to single-year data and are included where possible with descriptive comments regarding trends.
- Caution should be taken whenever data involves comparisons between jurisdictions, sectors or institutions, as extraneous factors can influence the data and lead to readers drawing false conclusions. Comparative data of this kind should draw the attention of the reader to all relevant factors.
- Data will also be provided, where possible, for students according to gender, socioeconomic status (SES) and geographic location.

International studies may provide good information about the performance of Australian students and when used, they need to be accompanied by appropriate contextual information.

## Data quality

It is intended that only data that are deemed to be of high quality should be published. This requires clear data specifications which, while not always being published, must be available from the organisations responsible for data collection. It is important that estimates of statistical uncertainty should be published with the performance measures and not in a separate appendix.

The usefulness of data will be enhanced by the publication of contextual information that enables the reader to take a considered and critical view of the measure. Similarly, when information is necessary to explain the data, caveats should be included and be placed as near as possible to the data.

## Census versus sample data

This edition of the *National Report on Schooling in Australia* contains data derived from whole-of-cohort census measurement as well as data obtained from samples. Both kinds of measurement can provide useful information for nationally comparable reporting. Whole-cohort testing is likely to be both

more expensive and intrusive than sample testing and these factors may make sample testing the preferred option. It is also recognised that sample testing may make possible the use of richer assessment tasks than are likely to be possible in census testing. However, sample size must be sufficient to allow reporting by jurisdictions and by sub-groups. Stratified samples are usually constructed to ensure adequate numbers of students in some sub-groups.

A similar situation exists when using survey data. Census data can be disaggregated to report by jurisdictions and by sub-groups but are more expensive to collect. Sample surveys must be constructed with sufficient sample size to allow reporting by jurisdictions and by sub-groups.

School authorities are anxious to limit both the cost and the intrusiveness of data collection exercises and will frequently seek to use data that has been collected for more than one purpose. Where sample surveys are conducted it is often necessary for authorities to over-sample some sub-group populations so as to be able to report on them.

## Nationally consistent definitions

The use of disaggregated data in performance indicators to provide information about particular sub-groups has the potential to raise awareness of problems that these groups may be experiencing. However, it can also generate prejudice or reinforce stereotypes and therefore needs care in presentation. The *National Report on Schooling in Australia* will attempt to provide data for the following sub-groups, preferably using consistent definitions:

- Indigenous students
- students of language backgrounds other than English
- students with disabilities.

In order to report on the outcomes of student sub-groups, including educationally disadvantaged students, in a nationally consistent manner, the NEPMT has made significant progress in developing definitions that can be applied consistently across the country.

## Sex

In March 2000, ministers endorsed the NEPMT's recommendations on definitions for sex, agreeing that the Australian Bureau of Statistics (ABS) standard for identifying

students' sex be adopted for the purposes of nationally comparable reporting of outcomes within the context of the National Goals for Schooling in the Twenty-first Century.

## Indigenous

In March 2000, ministers endorsed the NEPMT's recommendations on definitions for Indigenous students, agreeing that the ABS standard for identifying Indigenous students be adopted for the purposes of nationally comparable reporting of outcomes within the context of the National Goals for Schooling in the Twenty-first Century:

Is this student of Aboriginal or Torres Strait Islander origin?

No

Yes, Aboriginal

Yes, Torres Strait Islander

At the end of 2000, jurisdictions were using variants of the standard identifier in enrolment systems, and there were often differences between how Indigenous status was collected at enrolment and at testing time. In the light of this, the ABS began negotiating with jurisdictions regarding its full introduction.

## Socioeconomic disadvantage

In October 1999, the NEPMT commissioned the Australian Council for Educational Research (ACER) to develop options for a common definition and approach to the measurement of SES. The basic characteristics of the proposed approach recommended by ACER are that:

- SES of students should be based on individual measures rather than on aggregated area measures
- SES should be based on parental occupation and education
- socioeconomic disadvantage should be measured using the health-card status of the student's parents.

The ABS has been commissioned to undertake a feasibility study with assistance from the Victorian Department of Education, Employment and Training and the Northern Territory Department of Education. The study aims to:

- 1 test the feasibility of collecting, capturing and coding information about SES and language background other than English (see section below) in Victoria and the

Northern Territory (with feasibility defined in terms of accuracy and burden on current education department systems, schools and parents)

- 2 determine whether the required information can reasonably be collected on school enrolment forms
- 3 determine the possibility of using the enrolment data in conjunction with test-based data.

A report on this study is expected to be available in early 2002.

## Language background other than English

In November 1999, the NEPMT commissioned ACER to develop a discussion paper on the measurement of language background, culture and ethnicity for the reporting of nationally comparable outcomes of schooling. When the findings and recommendations of the ACER team were received in 2000, NEPMT endorsed the use of the already agreed MCEETYA definition of a student of language background other than English, as a student either:

- born in a non-English-speaking country, or
- born in Australia, with one or both parents born in a non-English-speaking country, or
- an Indigenous student for whom English is not the first language.

In line with the ABS standards on cultural and language diversity, NEPMT also endorsed the following indicators of language background of students:

- country of birth of student
- country of birth of father
- country of birth of mother
- main language other than English spoken at home.

As noted above, the ABS is now conducting a feasibility study which included data on language backgrounds.

## Geographic location

In November 1999, the NEPMT commissioned Dr Roger Jones to develop a discussion paper on a common definition and approach to the measurement of geographic location of students for the purpose of reporting outcomes against the national goals. During 2000, NEPMT received advice from

Dr Jones as well as further advice from the ABS and began preparing recommendations to ministers. Among the issues being considered were:

- definition of geographic location based on the home address of the student
- for primary school students, the location of the primary school being used as surrogate for the home location of the student
- geographic location based on home address during year 9 secondary schooling being used for age cohort comparisons of outcomes from schooling and in post-school education, training and employment
- ABS proposals for measuring remoteness, by incorporating a concept of remoteness based on the Accessibility/Remoteness Index of Australia into the 2001 Australian Standard Geographical Classification.
- a structure for classifying geographic location that divides Australia into three zones (the Metropolitan, Provincial and

Remote Zones) and five categories (Metropolitan and Provincial Zones each subdivided into two categories, and the Remote Zone). When data permits, a Very Remote Zone could be added.

## Students with disabilities

Work on the definition of students with disabilities commenced towards the end of 2000, with the establishment of a sub-group to manage a project to develop a common approach to defining and reporting on the achievements of these students.

The first stage of the project, due for completion before the end of 2001, will provide information on definitions and approaches currently in use, and the identification of the range of issues pertinent to nationally comparable reporting for students with disabilities as they relate to the National Goals. The second stage will be the development of options for a common definition of students with disabilities for use in the national reporting of outcomes.

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# Glossary

**ABSTUDY:** A Commonwealth financial assistance scheme for Aboriginal and Torres Strait Islander students wishing to go on with further studies.

**Aboriginal and Torres Strait Islander student:** A student of Aboriginal or Torres Strait Island origin who identifies as an Aboriginal or Torres Strait Islander.

**Affiliation of non-government schools:** Non-government schools are classified into two groups: Catholic and independent. Included in the independent category are schools with specific religious affiliations (other than Catholic) and schools that are inter-denominational, non-denominational or which have no religious affiliation.

**Apparent retention rate:** The percentage of full-time students of a given cohort group who continued to a particular level/year of education. In this publication, retention rates are calculated for students who continued to years 10, 11 and 12 of secondary schooling.

**Appraisalment:** The Appraisalment process is a school-based process, which consists of: the identification of a student who may have learning difficulties or learning disabilities; data gathering about that student; the recommendation of a Program Type for intervention; the construction of a Support Plan by the class teacher; and Learning Support teachers to meet the needs of that student.

**Area of activity (of staff):** Considered to be primary education or secondary education. As a rule, the full-time equivalent (FTE) of staff is apportioned across areas of activity on the basis of time spent in the various areas of activity.

**Authentic Assessment:** Authentic Assessment provides opportunity for the learner to encourage and enhance his/her own learning through reflective processes in collaboration with the teacher. Authentic Assessment is often negotiated with the learner, has a genuine purpose and informs future directions for both the learner and the teacher.

**Authentic Student Voice:** Authentic Student Voice recognises the empowerment of students at a number of levels. Essentially it refers to students' ability to actively participate in decisions that impact on their learning and their environment. This process also highlights the importance of negotiating the curriculum with students.

**Barnados:** A child welfare agency that provides a range of family support and alternative care options for children, adolescents and their families.

**Benchmarks:** Benchmarks underpin the reporting of student achievement. They are nationally agreed minimum acceptable standards for literacy and numeracy at particular year levels,

representing the minimum level of achievement, without which a student will have difficulty making sufficient progress at school. Formulated through assessment procedures undertaken by States and Territories, benchmarks allow teachers to determine students' locations on an achievement continuum. See also *Developmental Continua*; *Key Performance Measures*.

**Category of school:** Schools are classified to the government or non-government sector.

**CLaSS :** A literacy intervention program known as the Children's Literacy Success Strategy.

**Constructivism:** Constructivism is both a theory of learning and a theory of knowing. Constructivist Theory acknowledges that the learner constructs their own meaning by making connections with the world around them. Learners continually reframe their learning as they make connections, while actively drawing from their knowledge, experiences and values that they bring to the learning process.

**Coordination Days :** The Coordination Day is part of the implementation process for secondary and central schools intending to implement the TAFE NSW accredited peer tutor training and program. All participating school, TAFE and district personnel are required to attend so that the necessary organisational, administrative and curriculum issues can be discussed and final arrangements coordinated to enable successful implementation of the course (Literacy Volunteer Tutoring Schools – Theory 9833A and Fieldwork 6915B).

**Criterion, or standards referenced:** A system of assessment whereby results are obtained by assessing whether the candidate has achieved some previously defined standards or criteria. Under this system there is no pre-determined pattern of distribution of results.

**Decoding Skills:** This refers to the ability to translate print into its spoken equivalent, including the process of breaking the word into its component phonemes or sounds.

**Descriptive Assessment:** A system of assessment in which assessors provide a written description of what each candidate is judged to be able to do. There is no determination of a numerical score, grade or rank.

**Developmental Continua:** The Developmental Continua use descriptors of behaviour to indicate what and how children are learning. These indicators are clustered into 'phases', allowing teachers to map overall progress. They demonstrate that children's learning does not develop in a linear sequence. Using the continua helps teachers make decisions about appropriate practice in the light of knowledge about student development. Government schools in Queensland use continua to map progress in Reading, Writing and Number in Years 1, 2 and 3.

**Educational attainment:** Measures the highest qualification obtained by the respondent. Qualifications may include those obtained at other than educational institutions (eg, nursing qualifications obtained at a hospital).

**ESL Bandscales:** A nationally produced assessment and reporting framework used in a number of States and Territories to monitor the progress of students whose first language is not English.

**First Steps:** An early literacy program developed by the Education Department of Western Australia during the early 1990s. First Steps provides teachers in the early years of schooling with developmental continua across a series of developmental phases for reading, writing, spelling and oral language plus support books that help teachers select and apply teaching strategies appropriate to students' needs and current stage of development. The program includes comprehensive professional development that helps K–3 teachers to accurately assess student literacy development and tailor teaching to student needs.

**Full Time Equivalent (FTE) of staff:** A measure of the total level of staff resources used. A full-time staff member, ie one who is employed full-time and is engaged solely on activities which fall within the scope of the National Schools Statistics Collection (NSSC), is equal to 1.0. The calculation of FTE for part-time staff is as follows:

The full-time equivalent of part-time staff performing some activities which fall outside the scope of this collection (eg preschool, TAFE) is calculated on the basis of the proportion of time spent on in-scope activities compared with that spent by a full-time staff member solely occupied by in-scope activities.

The FTE of part-time staff performing activities which fall solely within the scope of the NSSC is calculated on the basis of time worked compared with that worked by full-time staff performing similar duties.

Some States are not able to calculate FTEs on a 'time spent' basis for all staff functions but use wages paid as a fraction of full-time rate, or a resource allocation-based formula. Some also use a pro-rata formula based on student or teacher numbers to estimate aggregate FTE for some categories of staff.

**Full-time, or age participation rate:** The number of school students of a particular age and sex expressed as a proportion of the estimated resident population of the same age and sex. It indicates the proportion of the population who are in full-time education or training, or in full-time work, or in both part-time education and training and part-time work.

**Highest level of secondary schooling available:** The highest level of secondary schooling (or equivalent) offered by the education system at the time the respondent left school.

**In-school expenses:** In-school expenses are those incurred in the payment of salaries and allowances and non-salary costs for establishments defined as schools and Ancillary Education Establishments (AEEs).

**Key Performance Measures:** Indicators of student learning outcomes, these are a set of measures, limited in number and strategic in orientation, that provide nationally comparable data on aspects of performance critical to the monitoring of progress against the National Goals for Schooling in the Twenty-first Century. Key performance measures assist in establishing the skills and abilities of a key learning area that are achievable by students in particular year levels.

**Kriol :** The first language for a significant number of Aboriginal people living in northern Australia.

**Leavers:** Persons who were full-time students at any time in the previous calendar year, but were not full-time students at the time of the survey.

**Level of education:** This can be defined as follows:

- (a) primary education is that full-time education which typically commences at around age 5 and lasts for seven to eight years. It does not include sessional education such as pre-school education. In New South Wales, Victoria, Tasmania and the Australian Capital Territory, primary education may extend from pre-year 1 to year 7 (or equivalent). In Queensland and Western Australia it may extend from year 1 to year 7 (or equivalent);
- (b) secondary education is that education which typically commences at around age 12 after completion of primary education and lasts for five or six years. In New South Wales, Victoria, Tasmania and the Australian Capital Territory, secondary education may extend from year 7 to year 12 (or equivalent). In Queensland, Western Australia, South Australia and the Northern Territory it may extend from year 8 to year 12 (or equivalent).  
  
Junior secondary education comprises years 7 to 10 in New South Wales, Victoria, Tasmania, and the Australian Capital Territory and years 8 to 10 in Queensland, South Australia, Western Australia and the Northern Territory.  
  
Senior secondary education comprises years 11 and 12 in all States and Territories; and
- (c) combined education refers to those schools which offer both primary and secondary education.

**Lindamood Language Program:** This is the Lindamood Phoneme Sequencing Program for Reading, Spelling and Speech. The Lindamood Program develops the auditory perceptual skills basic to reading and spelling, with the premise

that increased oromotor (movement of the mouth) and perceptual awareness of sounds assists children to make the links between sounds and letters. It is appropriate for children with specific difficulties in phonological awareness and provides experience at a level prior to most phonics or reading programs.

### Major function (of staff)

Staff have been categorised according to their major function, which is based on the duties in which they spend the majority of their time. The functional categories for school staff are as follows:

- (a) teaching staff are staff who spend the majority of their time in contact with students, ie support students either by direct class contact or on an individual basis, and have teaching duties, ie are engaged to impart the school curriculum. Teaching staff include principals, deputy principals and senior teachers mainly involved in administrative duties;
- (b) specialist support staff are staff who perform functions that are of special benefit to students or teaching staff in the development of the school curriculum. While these staff may spend the majority of their time in contact with students, they are not engaged to impart the school curriculum. Instead they generally undertake such duties as providing advice on appropriate courses of study or careers advice;
- (c) administrative and clerical staff are staff whose main duties are generally of a clerical/administrative nature. Teacher aides and assistants are included in this category, as they are seen to provide services to teaching staff rather than directly to students; and
- (d) building operations, general maintenance and other staff are staff involved in the maintenance of buildings, grounds etc. Also included are staff providing associated technical services and janitorial staff.

The functional categories for staff not generally active in schools are as follows:

- (a) executive staff are staff generally undertaking senior administrative functions which are broader than those of a secondary school principal. Executive staff salaries generally exceed those of a secondary school principal;
- (b) specialist support staff are staff who manage or are engaged in curriculum development and research activities, assisting with teaching resources, staff development, student support services and teacher support services;
- (c) administrative and clerical staff are staff whose main duties are of a clerical/administrative nature. Includes office staff, publicity staff and information technology staff in State and regional offices; and

- (d) building operations, general maintenance and other staff are staff involved in the maintenance of buildings, grounds etc. Also included are staff providing associated technical services and janitorial staff.

**Metacognition:** Metacognition focuses on learners consciously reflecting on their learning process. It involves learners planning, monitoring and evaluating their learning. Metacognition is thinking about the process of thinking. Reflection is an essential process to enhance metacognitive processes.

**Norm-referenced:** A system of assessment in which the pattern of distribution of results is in the form of a normal distribution curve. That is, the majority of scores are distributed around the median with smaller numbers at the two extremities.

**Out-of-school expenses:** Out-of-school expenses are those incurred in the payment of salaries and allowances and non-salary costs for other education establishments and any other in-scope expenses which do not fit the definition of in-school expenses.

**READ 180:** A literacy intervention program formulated by the educational publishing group, Scholastic, Inc.

**Reading Recovery:** A one-to-one literacy intervention process based on the work of New Zealand educator, Marie Clay and widely used in Australian primary schools.

**Relative Standard Errors:** Since the Australian Bureau of Statistics (ABS) survey estimates in this publication are based on information obtained from occupants of a sample survey of dwellings, they are subject to sampling variability. That is, they may differ from those estimates that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of dwellings was included.

Another measure of the likely difference is the relative standard error, which is obtained by expressing the SE as a percentage of the estimate. The smaller the estimate is, the higher the relative standard error (RSE). Very small estimates may be subject to such high RSEs as to seriously detract from their value for most reasonable uses. In the tables in this publication, percentages without any annotation have RSEs of less than 10 per cent and are considered sufficiently reliable for most purposes. Percentages with RSEs between 10 per cent and 25 per cent are preceded by an 'a' and may be sufficiently reliable depending on the purpose. Percentages with RSEs of 25 per cent or more are preceded by a 'b' and should be used with caution.

**Running Records :** These are ongoing records of student literacy progress maintained by classroom teachers.

**School (other than a special school):** Schools must satisfy the following criteria:

- (a) its major activity is:
  - (i) the provision of full-time day primary or secondary education
  - or
  - (ii) the provision of primary or secondary education by radio or correspondence;
- (b) it is headed by a principal (or equivalent) responsible for its internal operation; and
- (c) it is possible for students to enrol for a minimum of four continuous weeks, excluding breaks for school vacations.

The term 'school' includes schools in institutions and hospitals, mission schools and similar establishments. The term excludes preschools, kindergarten centres, pre-primary classes in or attached to non-special schools, senior technical and agricultural colleges, evening schools, continuation classes, and institutions such as business or coaching colleges.

**Spalding Method:** The Spalding Method is a literacy program based on the work of literacy theorist, Romalda Spalding. It encourages learners, providing them with explicit, sequential, analytical instruction in spelling, writing, and listening/reading comprehension.

**Special school:** A school which requires students to exhibit one or more of the following characteristics before enrolment is allowed:

- intellectual disability
- physical disability

- autism
- social/emotional disturbance
- in custody or on remand.

The following are not considered to be special schools: intensive language centres; schools whose distinguishing feature is the lack of formal curriculum; or schools for exceptionally bright or talented students.

**Staff:** Persons who are involved in the administration or provision of primary, secondary or special education. Staff are categorised as school staff and staff not generally active in schools. School staff include all teaching staff and those non-teaching staff who spend more than half their time actively engaged in duties in one or more schools.

**Standardised Test:** An assessment instrument which has been graded or levelled against a previously-tested, fixed cohort of students.

**Student:** A person who is enrolled in a school and active in a course of study other than pre-school or TAFE courses. A full-time student is one who undertakes a workload specified as full-time in the government or non-government sector. A part-time student is one who undertakes a workload less than that specified as full-time in either sector. The method used to determine student workload varies between States and Territories. Most of the tables in this publication relate to full-time students, unless indicated otherwise.

**Two-way bidialectal education :** The ability to use two languages fluently and to operate in two cultures.

**Year 11P:** Adult students or students doing year 11 over a 2–3 year span.



# Acronyms and Abbreviations

ABS	Australian Bureau of Statistics
ABSCQ	Australian Bureau of Statistics Classification of Qualifications
ACACA	Australian Curriculum, Assessment and Certification Authorities
ACER	Australian Council for Educational Research
AGSRC	Average Government Schools Recurrent Costs
AIC	Assistance for Isolated Children
AIEOs	Aboriginal and Islander Education Officers
AIM	Achievement Improvement Monitor
AIS	Association of Independent Schools
AISNT	Association of Independent Schools of the Northern Territory
AISQ	Association of Independent Schools of Queensland
ANTA	Australian National Training Authority
AQF	Australian Qualifications Framework
AQTF	Australian Quality Training Framework
ASCED	Australian Standard Classification of Education
ASP	Australian Students' Prize
ASSPA	Aboriginal Student Support and Parent Awareness Scheme
ATAS	Aboriginal Tutorial Assistance Scheme
ATSI	Aboriginal and Torres Strait Islander
BST	Basic Skills Test
CAER	Centre for Applied Educational Research
CECV	Catholic Education Commission of Victoria
CEI	Cost Effective Instrument
CEO	Catholic Education Office
CESCEO	Conference of Education Systems Chief Executive Officers
CISS	Choices for Indigenous Students
ClASS	Children's Literacy Success Strategy
CLNP	Commonwealth Literacy and Numeracy Programme
COAG	Council of Australian Governments
CSF	Curriculum and Standards Framework, Victoria
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DART	Developmental Assessment Resource for Teachers
DEET	Department of Education, Employment and Training, Victoria
DETE	Department of Education, Training and Employment, South Australia
DETYA	Commonwealth Department of Education, Training and Youth Affairs <sup>12</sup>
DSP	Disadvantaged Schools Program
EBA	Enrolment Benchmark Adjustment
ECEF	Enterprise and Career Education Foundation
EdNA	Education Network Australia
ELI	Early Literacy Initiative
ELLA	English Language and Literacy Assessment
ERC	EdNA Reference Committee
ESB	English Speaking Background
ESL	English as a Second Language
ESL–ILSS	ESL for Indigenous Language Speaking Students
EYES	Early Years in Education Society
FELIKS	Fostering English Language in Kimberley Schools
FTE	full-time equivalent
GST	Goods and Services Tax
HSC	Higher School Certificate
IBIS	Initiatives Based in Schools
ICCAS	Implementing the Common Curriculum in Aboriginal Schools
ICT	Information and Communication Technology
IEA	International Association for the Evaluation of Educational Achievement
IEDA	Indigenous Education Direct Assistance Programme
IESIP	Indigenous Education Strategic Initiatives Programme
IESIP-SRP	Indigenous Education Strategic Initiatives Program, Strategic Results Project
IT	Information Technology
IT&T	Information Technology & Telecommunications
KEDO	Koorie Education Development Officer
KILOs	Key Intended Literacy Outcomes
KLA	Key Learning Area

LANNA	Literacy and Numeracy National Assessment
LARP	Literacy Advance Research Project
LBOTE	Language Background other than English
LOTE	Language other than English
LUAC	Language Through Understanding Across the Curriculum Program
MAP	Multilevel Assessment Program
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
MIST	Middle Infant Screening Test
MOVEET	Council of Ministers of Vocational Education, Employment and Training
MULTILIT	Making Up Lost Time in Literacy
MYRAD	Middle Years Research and Development
NCEC	National Catholic Education Commission
NCISA	National Council of Independent Schools' Associations
NEPMT	National Education Performance Monitoring Taskforce
NIELNS	National Indigenous English Literacy and Numeracy Strategy
NLLIA	National Languages and Literacy Institute of Australia
NLW	National Literacy Week
NSSC	National Schools Statistics Collection
NTCE	Northern Territory Certificate of Education
NTDE	Northern Territory Department of Education
OECD	Organization for Economic Co-operation and Development
PAC	Prince Alfred College
PASS	Program of Additional Structure and Support
PAT	Primary Achievement Test
PIF	Performance Indicator Framework
PIPS	Performance Indicators in Primary Schools Baseline Assessment
PISA	Program for International Student Assessment
QBSSES	Queensland Board of Senior Secondary School Studies
RACE	Reading and Comprehension Enrichment
RATS	Reading Acquisition for Teenage Students
RTO	Registered Training Organisation
SACCS	South Australian Commission for Catholic Schools
SACE	South Australian Certificate of Education
SACS	Schools Administrative Computing System
SACSA	South Australian Curriculum Standards and Accountability
SCLIP	School Leadership In-service Program
SE	Standard Error
SEA	School Entry Assessment
SES	socioeconomic status
SITES	Second Information Technology in Education Study
SNAP	Secondary Numeracy Assessment Program
SOSE	Studies of Society and Environment
SRI	Scholastic Reading Inventory
SRP	Strategic Results Project
STEA	Schools Transitional Emergency Assistance
TAFE	Training and Further Education
TASSAB	Tasmanian Secondary Assessment Board
TERMS	Teaching Early Reading More Successfully
THRASS	Teaching Handwriting, Reading and Spelling Skills
TIMSS	Third International Mathematics and Science Study
TIMSS-R	Third International Mathematics and Science Study – Repeat
TORCH	Testing of Reading Comprehension
VEGAS	Vocational and Educational Guidance for Aboriginals Scheme
VET	Vocational Education and Training
VETIS	VET in Schools
WALNA	Western Australian Literacy and Numeracy Assessment
WBLA	Writing-based Literacy Assessment
WrAP	Writing Assessment Program
YCLC	Youth and Community Learning Centre, Toowoomba