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## 3 GOVERNMENT SCHOOL EDUCATION

### 3.1 Introduction

The scope of the Report in the schools area remains the performance of State and Territory Government primary and secondary school *systems*. These schools account for 74 per cent of primary students and 67 per cent of secondary students.

The Report does not try to assess the performance of individual schools or cover non-government schools (although these schools do receive some government funding).<sup>1</sup> Vocational education and training (VET) activities undertaken in schools and school activities undertaken within the Technical and Further Education (TAFE ) system are also excluded.<sup>2</sup>

As with the 1995 Report, a framework built around effectiveness and efficiency indicators was used to assess performance. There has been some progress in the provision of performance information. Data on mathematics and science outcomes at specific ages (for government and non-government schools combined) is now available. There is a proposal to establish national literacy and numeracy benchmarks for Years 3, 5, 7 and 9.

However, there is only limited comparable information for jurisdictions which would allow the relative performance of government school systems to be assessed. A key indicator, comparable learning outcomes, is still unavailable. The Steering Committee is committed to addressing this complex and difficult issue, and it has recently let a consultancy as the first step to provide comparable literacy information for the next Report. Furthermore, Ministers have agreed that any further national surveys of student achievement will collect data that is comparable across jurisdictions.

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<sup>1</sup> Some reported data included non-government schools because the data were available only on a combined basis.

<sup>2</sup> Some VET activity in schools may have been included where it was not possible to identify it separately.

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## 3.2 Profile of the sector

School education is provided by both government and non-government schools. Government schools, the focus of this Report, are the direct responsibility of State and Territory Governments. Non-government schools operate under conditions determined by government registration authorities and receive significant government funding.

### 3.2.1 Size and roles

The complementary roles of schools, State and Territory Governments and the Commonwealth Government are outlined in the preamble to the *Common and Agreed National Goals for Schooling* (SCRCSSP 1995). Briefly, schools are responsible for the provision of schooling by means of a curriculum determined by State and Territory Governments which have the constitutional and major responsibility for schooling. The Commonwealth Government has a significant role in identifying national priorities for schooling that it supports with special purposes funding. National priorities and strategies are generally endorsed by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA).

Responsibility for funding government schools is shared between the State and Territory and the Commonwealth Governments, with Commonwealth Specific Purpose Payments accounting for about 10.5 per cent of total government expenditure on government school education. The Commonwealth Government share of funding varied from over 11 per cent in Victoria to 6 per cent in the NT (Figure 3.1).

Government schools are one of the largest areas of State and Territory Government expenditure. Their expenditure on school education was around \$11.4 billion in 1994–95 — a fall of 3 per cent in real terms from the previous year.<sup>3</sup> The fall reflected a major reduction in expenditure in Victoria which was partly offset by an increase in nominal expenditure in all other states and territories.

Nationally, there were over 2.2 million government school students in 1995. Differences in the size of the government school student body in each state and territory largely reflected the population but were also influenced by factors

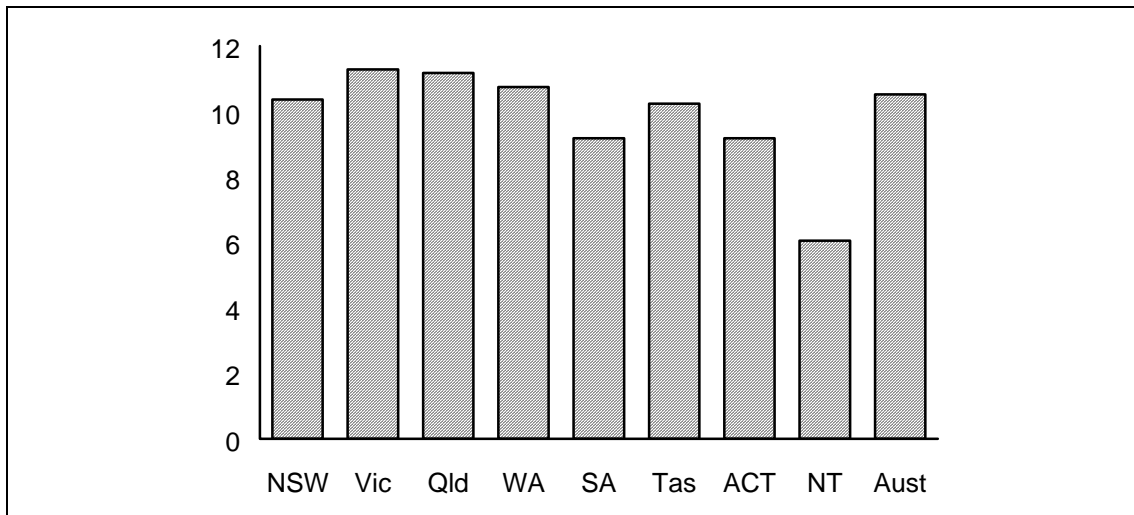
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<sup>3</sup> The NSSC sourced figure of \$11.4 billion for school education differs from the ABS figure of \$15.4 billion in the Education preface which includes Commonwealth Government expenditure and expenditure on non-government schools. The NSSC and ABS also use different counting rules.

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such as differences in the proportion of the population of school age, the proportion of post-compulsory aged students engaged in school or vocational education, retention rates and non-government school enrolments.

Figure 3.1: Proportions of total government school expenditure funded by Commonwealth Government Specific Purpose Payments, 1994–95 (per cent)



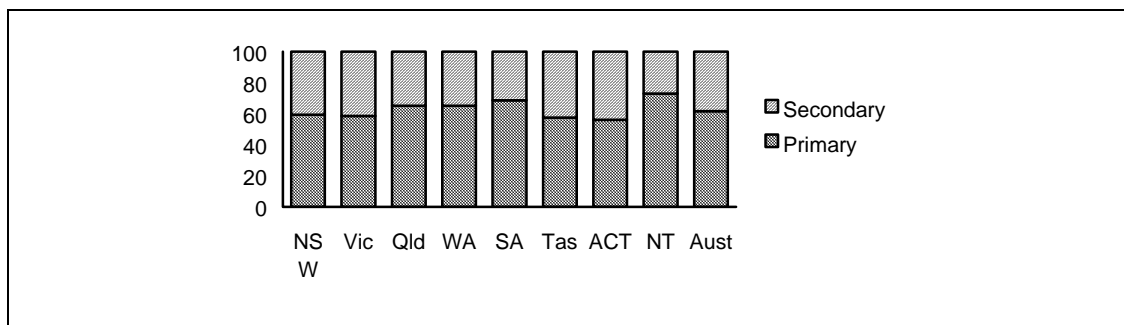
Source: Table 3A.3

In 1995, NSW had over one-third of Australia's government school students, followed by Victoria with nearly one-quarter, Queensland with 18 per cent, WA with 10 per cent, SA with 8 per cent, and Tasmania, the ACT and the NT each accounting for under 3 per cent. These students were taught by 144 000 primary and secondary school teachers (MCEETYA 1995).

### 3.2.2 Mix of students and schools

The ratios of primary and secondary student numbers varied across jurisdictions, with the NT having the highest proportion of primary students (75 per cent) and the ACT having the lowest (55 per cent) (Figure 3.2). The ratios were affected by differences in the numbers of years of primary and secondary schooling in jurisdictions.

Figure 3.2: Primary and secondary school students, 1995 (per cent)<sup>1</sup>



1 In NSW, Victoria, Tasmania and the ACT primary school extended from Pre-year 1 to Year 6 and secondary school extended from Year 7 to Year 12. In SA and the NT, primary school extended from Pre-year 1 to Year 7 and secondary school extended from Year 8 to Year 12. In Queensland and WA primary school extended from Year 1 to Year 7 and secondary school extended from Year 8 to Year 12.

Source: Table 3A.1

### Priority groups

Several groups of students were identified in the 1995 Report as representing a priority in education. It was difficult to identify accurately the proportions of students facing various educational disadvantages because there was a lack of common agreed definitions across states and territories.

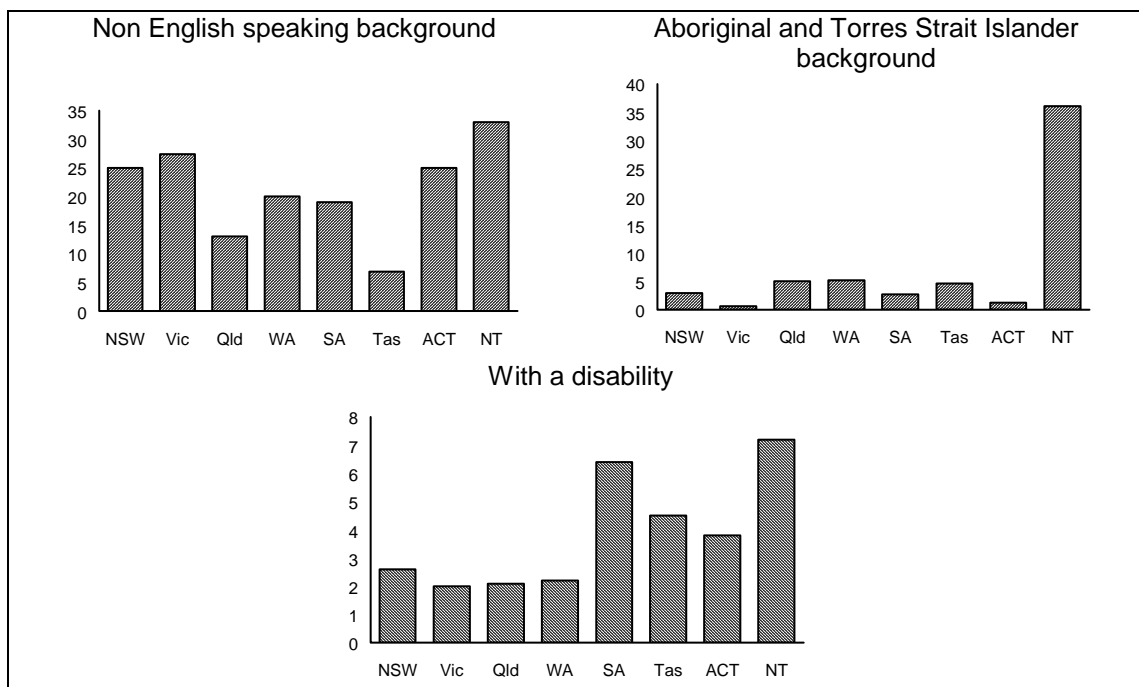
Approximate shares of students who came from a non English speaking background (NESB), who were Aboriginal and Torres Strait Islanders or who had a disability in 1995 in each jurisdiction are shown in Figure 3.3. The major difference among jurisdictions was the proportion of indigenous students — ranging from under 1 per cent in the ACT to over 36 per cent in the NT. The NT had the highest proportion in all three identified priority groups.

### Pattern of Year 12 enrolments by key learning area (KLA)

The main learning areas in Year 12, based on full year equivalent enrolments, were society and the environment, English, mathematics and science.<sup>4</sup> Enrolments in subjects classified in the Technology, and Health and Physical Education, KLAs have been the major growth area in recent years (Table 3.1).

<sup>4</sup> Full year equivalent enrolments for each learning area were based on the numbers of students undertaking each subject in the area and the class time per student spent on each subject relative to the total class time spent by all students on all subjects.

Figure 3.3: Students from non English speaking background, indigenous background or with a disability, 1995 (percent)<sup>1</sup>



1 There may be some double counting between priority groups.

Source: Table 3A.4

The pattern of class time, however, varied between states and territories. The major differences in mix across jurisdictions were in enrolments in the Society and the Environment KLA (Table 3.2).

Table 3.1: National student enrolment index by key learning area, Year 12, 1990, 1994 and 1995 (per cent)<sup>1</sup>

	<i>English</i>	<i>Maths</i>	<i>Society &amp; environment</i>	<i>Science</i>	<i>Arts</i>	<i>LOTE</i>	<i>Technology</i>	<i>Health &amp; PE</i>	<i>Not classified</i>
1990 <sup>2</sup>	18.6	18.8	25.9	18.4	6.6	2.6	6.7	2.5	0.0
1994 <sup>3</sup>	18.3	17.0	20.8	16.2	6.8	2.2	12.4	6.1	0.0
1995 <sup>3</sup>	18.3	17.4	18.9	15.3	7.7	2.4	13.2	6.8	0.1

1 The Index was equivalent enrolments in each subject as proportions of total equivalent enrolments. Differences in categorisation of subjects into learning areas, mean indices may not be directly comparable across jurisdictions.

2 Average of NSW, Victoria, Queensland, WA, and SA.

3 Average of enrolment indices in each state and territory. Data for the ACT were not available for 1995.

Sources: DEET 1994, States and Territories unpublished

Table 3.2: Student enrolment index by key learning area, Year 12, 1995, (per cent)<sup>1</sup>

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>NT</i>	<i>Average</i> <sup>2</sup>
English	17.7	21.0	17.3	18.8	13.3	16.2	17.4	18.3
Maths	19.1	15.0	18.2	17.6	17.3	12.5	17.8	17.4
Society and environment	23.6	18.6	10.5	12.2	27.3	24.5	24.4	18.9
Science	13.3	15.8	16.4	16.6	17.4	14.8	13.7	15.3
Arts	6.5	9.0	9.2	6.9	5.6	7.1	8.5	7.7
LOTE	2.8	3.1	1.3	1.2	2.7	2.2	1.2	2.4
Technology	12.0	13.3	18.7	16.0	12.2	13.9	13.1	13.2
Health & PE	5.0	3.9	8.4	10.5	4.3	6.1	3.9	6.8
Not classified	0.0	0.0	0.0	0.4	0.0	2.6	0.0	0.1

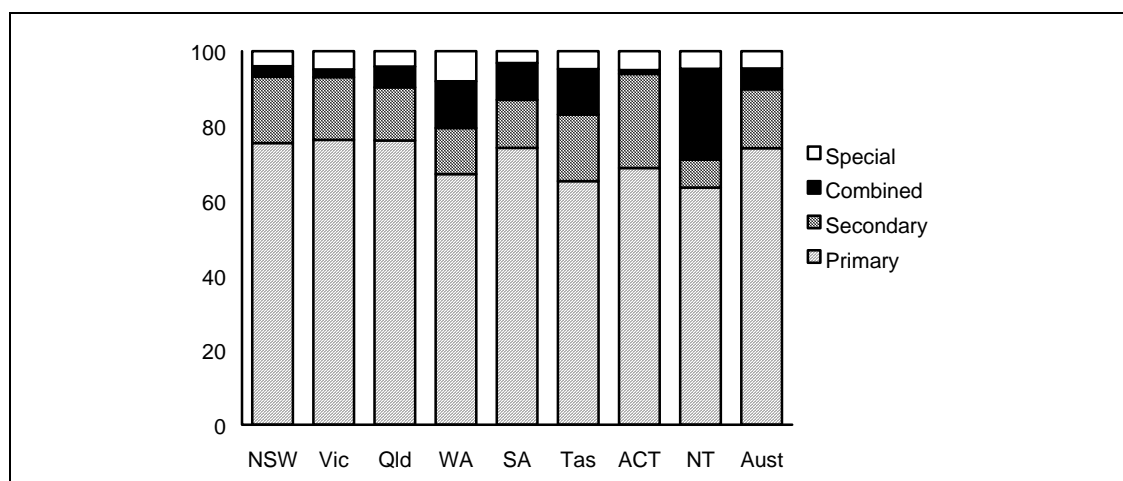
1 The Index was equivalent enrolments in each subject as proportions of total equivalent enrolments. Differences in categorisation of subjects into learning areas, mean indices may not be directly comparable across jurisdictions.

2 Average of enrolment indices in each state and territory. Data for the ACT were not available for 1995.

Source: States and Territories

The relative number of special, primary, secondary and combined schools also varied across jurisdictions. The major difference was in the shares of secondary and combined schools. The number of combined schools varied from less than one per cent of schools in Victoria and the ACT to nearly one-quarter of schools in the NT. The proportion of secondary schools was generally greatest in those jurisdictions with fewest combined schools; the ACT had the highest proportion (almost 26 per cent) followed by NSW and Victoria (about 17 per cent in each case) (Figure 3.4).

Figure 3.4: Government schools by type, 1995 (per cent)



Source: Table 3A.1

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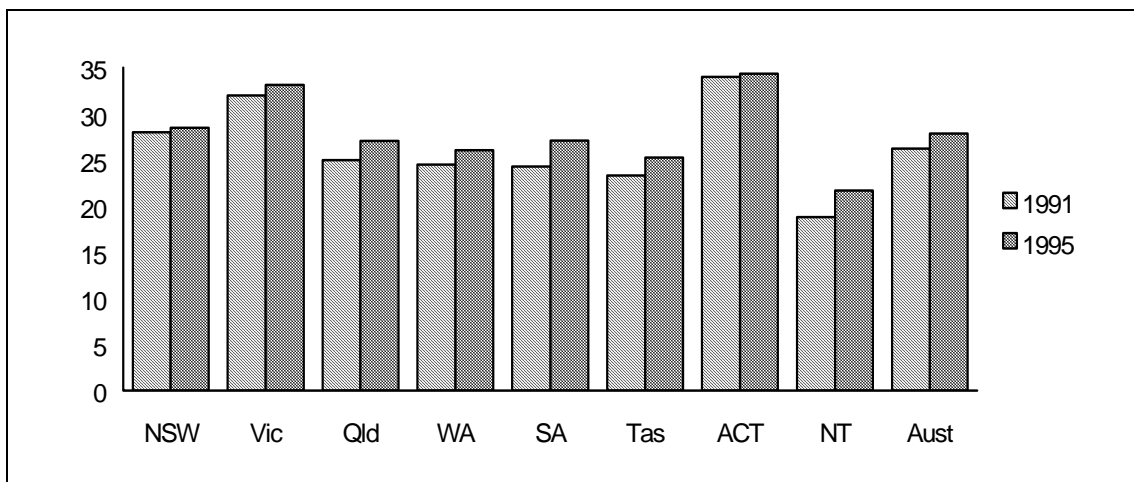
### 3.3 Recent developments in the sector

A number of recent developments in the sector are relevant to the Report.

#### 3.3.1 Non-government enrolments

There has been a gradual but steady movement of students from the government to the non-government schools. Across Australia, non-government students as a proportion of all students increased by over 1.5 per cent between 1991 and 1995. This trend was present in all states and territories, although with significant variation — the NT had the largest increase in the proportion of non-government school students over the period (2.9 per cent, but from the lowest base level) and the ACT had the smallest increase (0.35 per cent) (Figure 3.5).

Figure 3.5: Non-government school students as a proportion of all students, 1991 and 1995, (per cent)



Source: Table 3A.4

#### 3.3.2 Apparent retention rates

The growth in apparent Year 12 retention rates between 1982 and 1992 was highlighted in the 1995 Report. Since 1992, there has been a decline in the national retention rate. This may reflect an improved economic climate and hence better employment options for school leavers as well as an increase in the number of school age students engaged in vocational education outside of schools (Chapter 4). The retention rate for girls was more than 10 per cent higher than that for boys throughout the 1990s (ABS Cat. No. 4221.0).

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### **3.3.3 Ministerial Council resolutions**

In 1989 the Australian Education Council agreed to ten specific national goals for schooling (SCRCSSP 1995). In July 1996, a new National Literacy Goal was agreed to. It stated that 'every child leaving primary school should be able to read, write, spell and communicate at an appropriate level' (MCEETYA 1996a). In addition MCEETYA agreed:

- that common literacy benchmarks at Year 3 and Year 5 be developed; and ...
- that [a report be prepared] to the first MCEETYA meeting in 1997 setting out the nature of common literacy benchmarks at Year 3 and Year 5 and the levels of performance to be met in reading, writing, and other essential aspects of literacy (MCEETYA 1996a).

It is planned by 1998 to progressively establish benchmarks for literacy and numeracy outcomes in different year levels and that:

... any future National English Literacy Survey be amended to incorporate sufficient data enabling a national comparison between States and that results of this will be reported to a MCEETYA meeting prior to their release (MCEETYA 1996a).

All of the above MCEETYA initiatives are consistent with the Steering Committee aim of providing assessments of literacy and numeracy outcomes across jurisdictions for government school students.

### **3.3.4 National surveys of student learning outcomes**

A number of surveys of student learning outcomes have recently been completed or had their results published.

#### *Third International Mathematics and Science Study*

In 1994 and 1995, around 30 000 Australian students — 9 year olds, 13 year olds and Year 12 students — participated in the Third International Mathematics and Science Study (TIMSS). TIMSS involved the application of a standard test to more than a half million students in three grade/age based populations from 41 countries (Lokan, Ford and Greenwood 1996). The study reported outcomes on a jurisdictional basis for Australian government and non-government schools combined.

#### *National School English Literacy Survey*

In August and September 1996, 9000 government school students in Years 3 and 5 in government and non-government schools in all states and territories participated in the first National School English Literacy Survey (NSELS). The outcomes of the NSELS will be released in April 1997.

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The survey may assist in setting and measuring performance against national learning outcome objectives, but it will not meet the reporting objectives of this Report because:

- its sample size will not allow comparisons between jurisdictions; and
- Ministers have not yet agreed to repeat the survey on a regular basis (although there are proposals for future national surveys in the context of literacy and numeracy benchmarking).

### *Longitudinal surveys*

In 1975, 1980 and 1989, as part of a joint ACER/Commonwealth Government longitudinal survey of the transition of Australian youth into the workforce, over 5000 government and non-government school students aged 14 years were assessed for literacy and numeracy skills (DEETYA 1996b). In 1995, a further cohort of over 13 500 Year 9 students completed the assessments.

It is expected that the survey will establish a new cohort every three years and that members of previously established cohorts will be re-surveyed annually.

## **3.4 Framework of performance indicators**

There are several complexities in assessing the performance of school systems, such as:

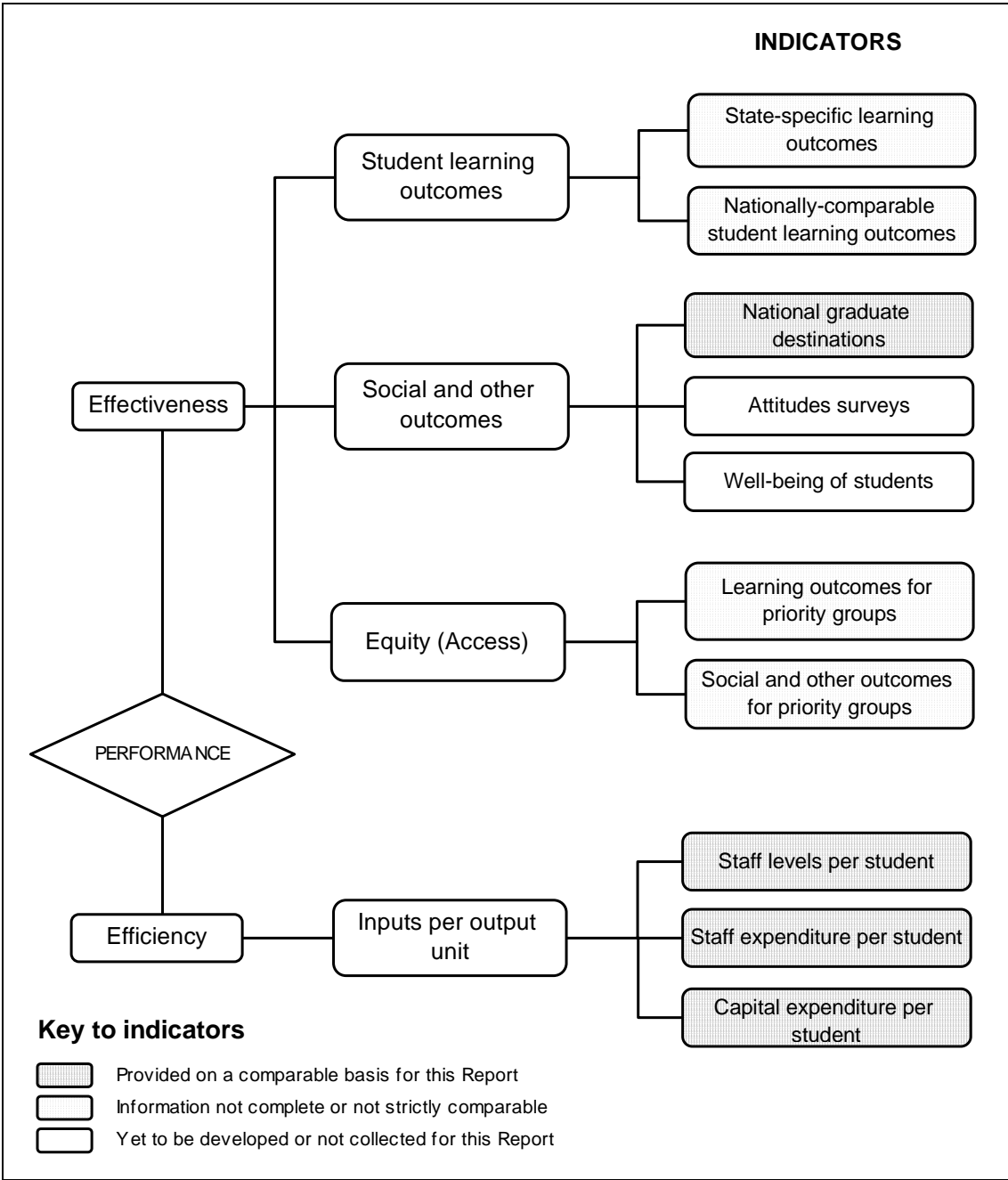
- reaching a consensus on definition of priority groups;
- reaching a consensus on the specific objectives of school education;
- selecting and precisely defining indicators that address these objectives; and
- allowing for different environments within which school services are delivered.

These issues need to be considered when comparing school education systems.

### **3.4.1 1997 framework of performance indicators**

The framework is unchanged from the 1995 Report (Figure 3.6). While there is some new information on learning outcomes across Australia, there is no recent information on social and other outcomes to report. There are significant links and overlaps among the three aspects of effectiveness, particularly between learning and social objectives.

Figure 3.6: Framework of performance indicators for government schools



### **3.5 Future directions**

There remains considerable scope to improve the quantity, quality and timeliness of information available to assess the performance of government school systems across Australia. Robust and valid comparable performance information across government school systems is not available for any of the major areas of performance — learning outcomes, social objectives and equity considerations. Their development remains a priority of the Steering Committee and will continue to be assisted by work under the auspices of MCEETYA.

#### **3.5.1 Learning outcomes**

Student learning outcomes are a key indicator of effectiveness and are central to the performance assessment framework for school systems. A number of projects provide information on various aspects of learning outcomes:

- the National Schools English Literacy Survey;
- the Longitudinal Surveys of Australian Youth;
- the Third International Maths and Science Study; and
- standard assessment programs in each state and territory.

The Steering Committee has used data from these projects wherever possible to minimise cost and disruption to students and teachers. However, while these studies provide valuable information about learning outcomes, they do not as yet provide information that meets the reporting requirements of the Steering Committee.

The reporting requirements of the Steering Committee are timely ongoing outcomes information which:

- is nationally comparable and statistically valid; and
- allows government school system performance to be identified.

The Steering Committee has focussed its efforts on the development of nationally comparable student learning outcomes (Box 3.1).

**Box 3.1: Progress towards establishing nationally comparable learning outcomes**

In 1994, the Australian Council for Educational Research (ACER) reported on options for achieving comparable learning outcomes. ACER suggested that there is sufficient common ground among curricula in Australia for comparable learning outcome measures to be developed.

Options identified by ACER for developing nationally comparable outcomes were:

- national surveys;
- participation in international studies; and
- use of data from existing State and Territory Government testing programs.

It was considered that establishing equivalences between existing tests was the most appropriate means of developing nationally comparable learning outcomes. Some obstacles to this process included differences among the states and territories in their Year levels tested, areas of the curriculum assessed, and timing of tests (Masters 1994).

In 1995, an investigation into how existing State and Territory Government testing programs could be equated identified two options:

- embedding common items; and
- administering tests to common samples of students.

It was suggested that testing could take place most readily in number, measurement, space and reading in Years 3 and 5 across Australia (Congdon and Stephanou 1995).

The next stage of the project has been separated into two phases:

- phase 1 — developing and reporting a detailed, workable plan for establishing equivalences (focussing initially on literacy); and
- phase 2 — implementing the detailed plan to establish equivalences.

A number of consultants with expertise in educational assessment across Australia were approached to submit proposals for phase 1 of the project, and it was let to Macquarie Research in October 1996. The consultant is required to directly consult with all State and Territory Governments in developing the plan.

The detailed plan (phase 1), along with an estimate of the cost of implementation (phase 2), is to be submitted by the consultant in March 1997. The Steering Committee will then determine whether to complete the implementation of the plan (phase 2).

Achieving comparable learning outcomes across Australian school systems requires a consensus on the most appropriate methodology and the cooperation of jurisdictions in addressing practical issues relating to current differences. The methodology adopted by the Steering Committee — based on the establishment of equivalences — recognises the potential benefits of building on existing State and Territory Government tests. In addition, the brief for the project directs that the consultant take into account any results arising from MCEETYA decisions on literacy benchmarks.

It is anticipated that the detailed plan will be completed by March 1997, and if agreed to, the plan will be separately tendered for completion in 1997. This will allow the Steering Committee to report nationally comparable literacy outcomes information in 1998.

If future national literacy surveys — such as another NSELS (or equivalent numeracy surveys) — establish nationally comparable outcomes directly, equivalences between existing tests will no longer be needed.

### **3.5.2 Equity considerations**

The National Strategy for Equity in Schooling outlined two principal equity goals — access and participation, and educational outcomes. Priority groups were considered to include indigenous people, students who are geographically isolated, students from a low socioeconomic background and students from a non English speaking background.

Most jurisdictions have specific programs which aim to address the difficulties of disadvantaged groups and collect information on participation and outcomes for these groups. Unfortunately, the lack of agreed definitions for priority groups has made it difficult to compare results or make any overall assessment. Achieving comparable statistics is a priority for 1997.

As a first step, MCEETYA has initiated a number of exercises to identify and quantify participation by disadvantaged students within school education systems. MCEETYA also plans to conduct an evaluative review of the National Strategy in 1998 and 2001.

### **3.5.3 Other objectives**

Social objectives are an important aspect of school education. As part of the preparations for the 1996 Annual National Report on Schooling in Australia, a sample study on the social objectives of schooling has begun.

Work is under way on describing and defining what is meant by a school education which is relevant to social needs. It is expected that baseline data will be collected from schools and students in Years 5 and 10 in the first term of 1997. Results should be available later in 1997.

## **3.6 Key performance results**

### **3.6.1 Learning outcomes**

Jurisdictional comparisons of outcomes on an ongoing, consistent basis are still unavailable. As mentioned earlier, some outcomes data are available, but only on a national or individual jurisdictional basis, or for government and non-government schools combined. Although these studies do not fully meet the needs of the Report, their results are still significant and are reported.

### **3.6.2 Third International Mathematics and Science Study**

The learning outcomes from TIMSS (a comparative study of mathematics and science achievement) are the only recent instance of comparable learning outcomes for mathematics and science skills being available for individual states and territories.

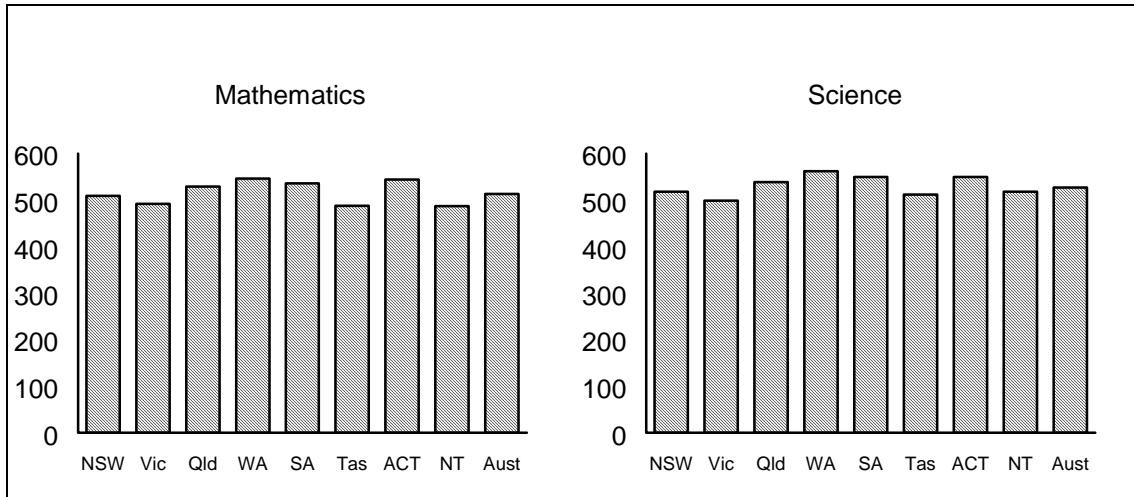
Australian results showed that, for a sample of 13 year olds:

- at the upper grade, only eight countries out of 40 performed better than Australia in mathematics and only four performed better in science;
- at the lower grade, only seven countries performed better than Australia in each of the two areas; and
- Australia was one of only six countries in which there were no significant gender differences in performance in both mathematics and science.

On a jurisdiction basis:

- WA, the ACT and SA performed particularly well in mathematics; and
- the NT, Tasmania and Victoria were consistently at the lower end of the rankings in both mathematics and science (Figure 3.7).

Figure 3.7: Third International Mathematics and Science Study, Overall Mathematics and Science achievement, 1994 (mean achievement scores)<sup>1</sup>



<sup>1</sup> Achievement relative to the international mean score of 500.

Source: Table 3A.5

Some care is required in interpreting the TIMSS data:

- students taking the test ranged in age from an average of 13.5 years (NSW, Victoria, and Tasmania) to 14.3 years (SA), although age had a very low correlation with achievement (Lokan, Ford & Greenwood 1996); and
- the results were based on government and non-government schools combined and hence were not necessarily representative of government schools alone. However, the proportion of government schools participating in TIMSS in most states and territories was relatively close to the nation wide average (69 per cent).<sup>5</sup> Assuming that the performance of non government schools relative to government schools is similar across jurisdictions, the observed differences in TIMSS results should generally reflect differences in government school students alone.

The patterns of total expenditure per student across jurisdictions over recent years did not seem to match the observed differences in jurisdiction performances. Although mathematics and science were only a part of the overall curriculum, and hence account for only a part of government school expenditure, this suggests that expenditure differences were unlikely to fully

<sup>5</sup> The two exceptions were the ACT (57 per cent of schools participating in TIMSS were government schools) and Tasmania (84 per cent of schools participating in TIMSS were government schools).

explain the apparent differences across jurisdictions in government school performance. While there is currently no published evidence to support this observation, the relationship between expenditure and outcomes is worthy of further investigation.

### 3.6.3 Longitudinal surveys

The *Youth in Transition* program of longitudinal surveys, conducted by the ACER since 1975, provided data on the patterns of participation in education and the labour force and the transitions within and between these persons in their mid-teens to mid-twenties. The surveys also collected data on student achievement in literacy as measured by a standardised test of 14 year old students (Box 3.2). Results of these surveys were unavailable for individual jurisdictions or for government schools in isolation.

#### **Box 3.2: Longitudinal Survey of Australian Youth — literacy outcomes**

The proportion of Year 9 students aged fourteen years who attained the basic skills of literacy was based on whether students achieved a 'satisfactory result' on tests of basic reading comprehension. The tests were designed according to a testing paradigm which included setting objectives in terms of subject matter, specifying tasks which a literate student could be expected to perform, and testing and revising test items to ensure the validity and appropriate level of difficulty for items.

A satisfactory result — attainment of basic literacy skills — was defined as:

... 'correct answers to 80 per cent of all particular items associated with a task or objective'. Thus, in the 1995 test the 30 per cent of students deemed not to have a mastery of literacy failed to achieve an 80 per cent correct mark on the literacy test.

This score provided the basis for measuring whether an individual achieved a basic level of literacy, in all tests from 1975 onwards. Tests subsequent to 1975 have been adapted from the original and contain common items, thus permitting the results to be placed on a common scale and compared over time. (DEETYA 1996b)

The general conclusions were:

- the percentage of students who failed to master English as measured through basic reading comprehension tests remained largely unchanged between the twenty years at 28 per cent and 30 per cent; and

- the percentage of boys who did not attain the above mastery increased from 30 to 35 per cent and for girls it remained unchanged at around 26 per cent (Kemp 1996).

### 3.6.4 Jurisdiction learning outcome tests

Testing continues to take place at the system level in all states and territories except the ACT.<sup>6</sup> The outcomes information from these tests was not comparable across jurisdictions, but provided valuable information about trends within jurisdictions over time and, in some cases, across priority groups.

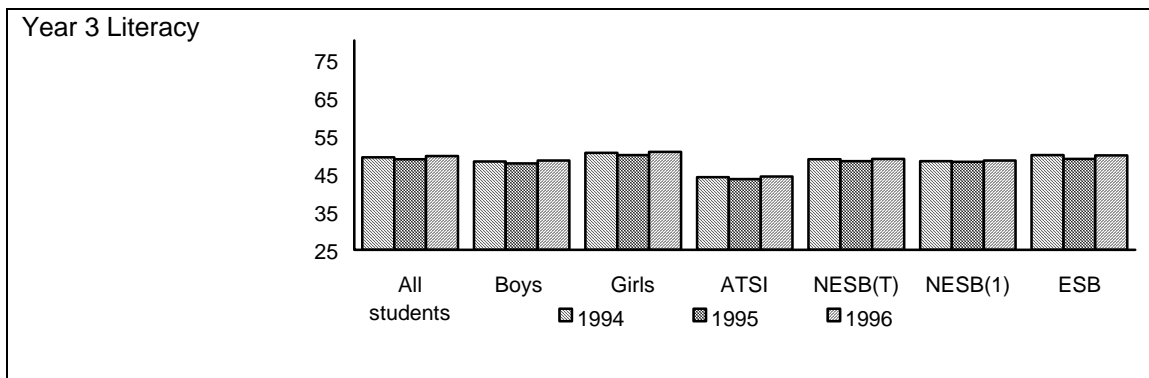
#### *New South Wales Basic Skills Test*

The NSW Basic Skills Test (BST) is an annual census program designed to measure Year 3 and 5 student achievement in aspects of literacy and numeracy. Students' achievements are grouped into skill levels.

Major trends over recent years, based on the mean test score of students, were:

- a small rise in Year 3 literacy in 1996 following a decline in 1995;
- a small rise in Year 3 numeracy between 1995 to 1996 generally and amongst priority groups; and
- relatively lower learning outcomes than for the total cohort in both literacy and numeracy for Aboriginal and Torres Strait Islander students (Figure 3.8).

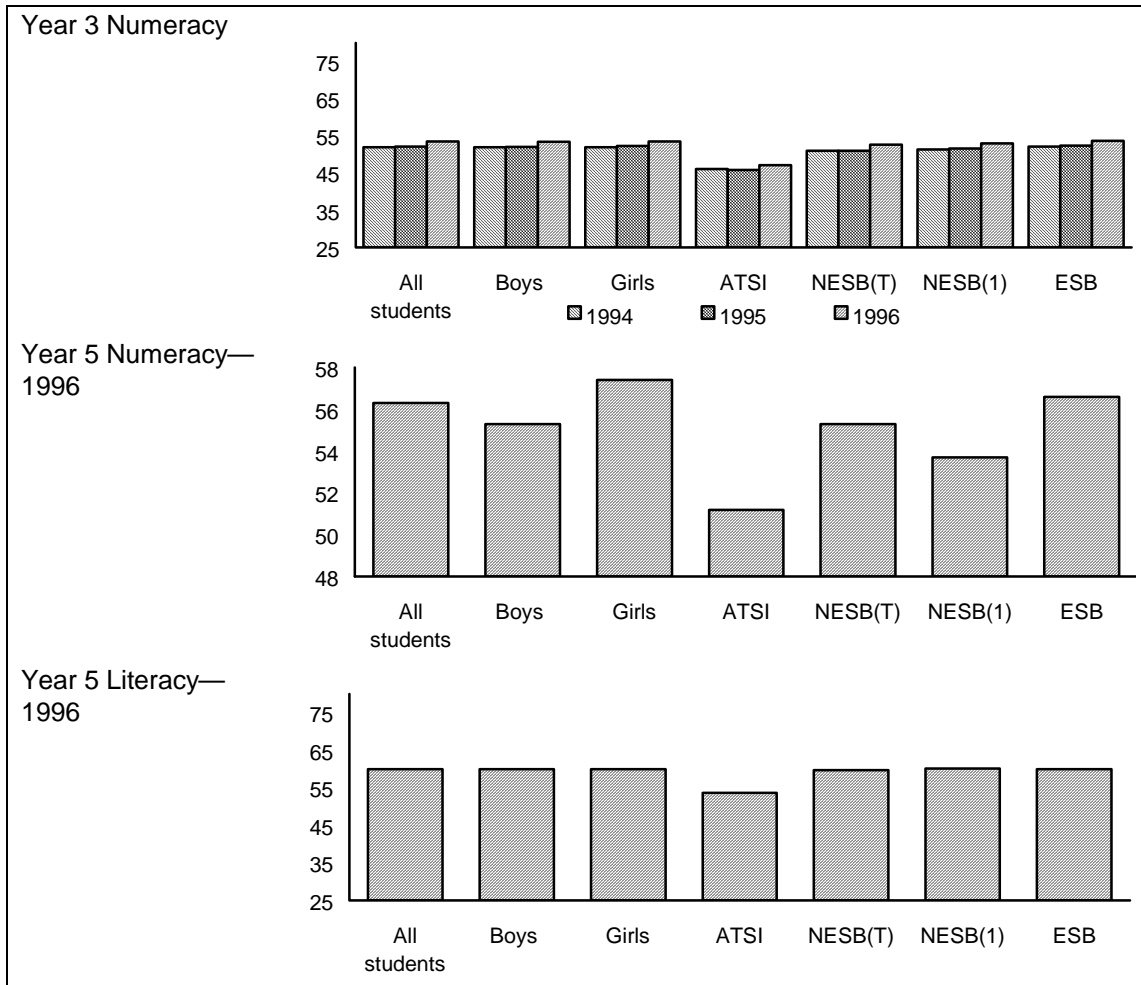
Figure 3.8: NSW Basic Skills Test results, 1994 to 1996 (mean test scores)<sup>1,2,3</sup>



(cont.)

<sup>6</sup> The ACT will implement system assessment of literacy for Years 3 and Year 5 at primary school in 1997. The introduction of literacy and numeracy assessment in high school is being planned for 1998. Primary school numeracy will also be assessed in 1998.

Figure 3.8: NSW Basic Skills Test results, 1994 to 1996 (mean test scores)<sup>1,2,3</sup> (cont.)



1 Prior to 1996, the Year 3 and Year 5 results were not comparable as they used separate scales. In 1996, the Year 3 and Year 5 results were reported on a common scale. As a result of the development of a common scale results are now reported on a scale from 25 to 80 instead of from 25 to 65. The means published for 1994 and 1995 for Year 5 are not directly comparable to the 1996 means. The data for Year 5 for 1994 and 1995 will be recalculated in order to make this comparison possible in the future.

2 As the scales for literacy and numeracy are quite separate, literacy and numeracy scores are not comparable.

3 NESB(T) (non English speaking background) and ESB (English speaking background) students were those who answered “yes” and “no” respectively to the question “Does anyone speak a language other than English in your home?”. NESB(1) were those students who have lived in Australia for four years or less and never or only sometimes speak English at home.

Source: Table 3A.14

### Victorian Learning Assessment Project

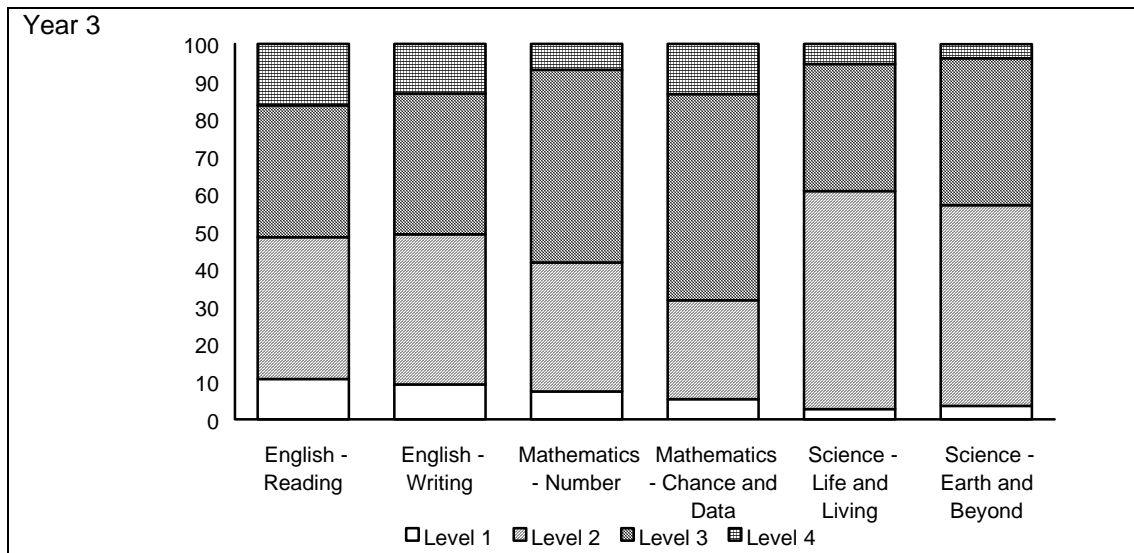
Victoria carried out the Learning Assessment Project (LAP) for the second time in 1996, testing all students in Years 3 and 5 in English and mathematics and, for the first time, science. As the 1996 test was held earlier in the school year

than the 1995 testing and different modes of English and strands of mathematics were assessed, trends could not be determined.

Results of the 1996 LAP test were presented in terms of the standards expected of different Year levels of school. The Curriculum and Standards Framework (CSF) provided seven levels for the reporting of student achievement across Preparatory Year to Year 10. In broad terms, Level 1 corresponded to a standard expected for students on completion of the first (Preparatory) year of schooling, Level 2 the end of Year 2, Level 3 the end of Year 4, Level 4 the end of Year 6 and Level 5 the end of Year 8. The 1996 results demonstrated a wide range of performance among students, some achieving CSF levels below that expected for their year level and others achieving CSF levels beyond that expected of their year level (Figure 3.9).

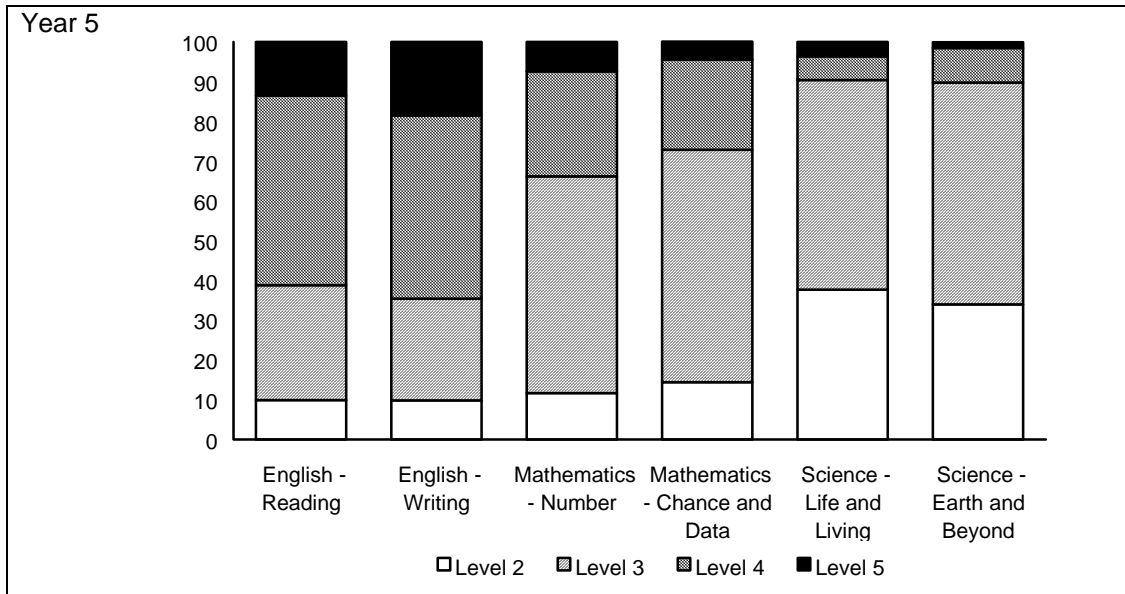
In general, in English reading and writing, across both age groups, girls performed better than boys. Non English speaking background, Aboriginal and Torres Strait Islander and disadvantaged students performed worse than average for all students. In mathematics and science there was little difference between sexes. Non English speaking background student performance in mathematics improved from Year 3 to be more like the average in Year 5. Aboriginal and Torres Strait Islander and disadvantaged students still performed worse than average for both these learning areas.

Figure 3.9: Victorian Learning Assessment Project results, 1996, (percentage of students achieving CSF level)



(cont.)

Figure 3.9: Victorian Learning Assessment Project results, 1996, (percentage of students achieving CSF level) (cont.)



Source: Table 3A.21

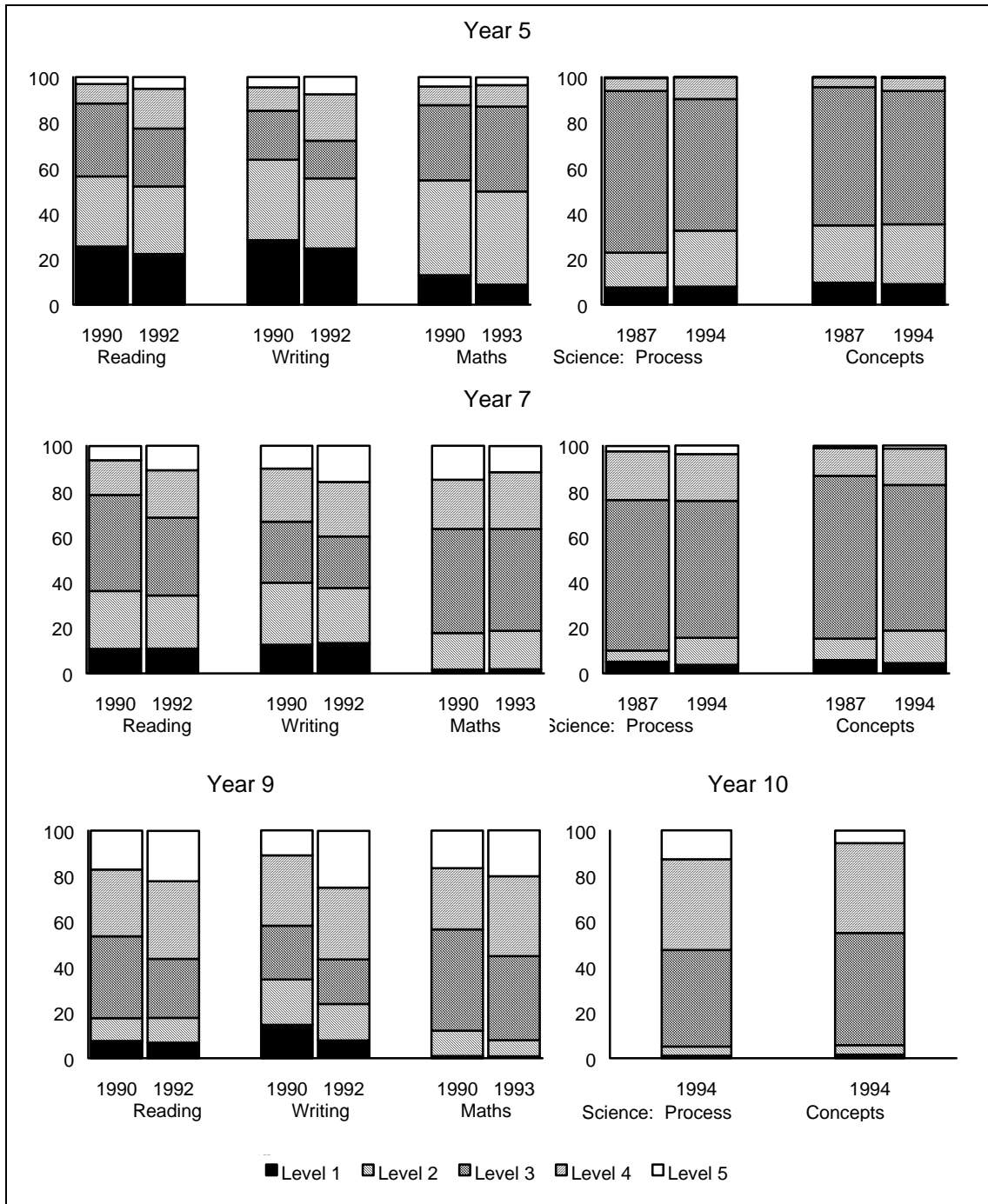
### Queensland Assessment of Performance Program

The Assessment of Performance Program (APP) has measured student outcomes in aspects of reading, writing, mathematics and science since 1990 using a sample of primary school students (Year 5 and Year 7) and secondary school students (Year 9 or Year 10). Student performance was portrayed on a scale which was typically divided into hierarchical levels, of which Level One is the lowest and Level Five the highest.

Major trends have been:

- a general improvement in reading, writing and mathematics since 1990 across all year levels, with more students performing at the higher levels of the scale and fewer students performing at the lower levels of the scale;
- a slight decline in performance on science process skills since 1987 for Years 5 and 7, with performance in 1994 also exhibiting more variability; and
- no overall change in performance on science concepts, although there was greater variability in performance in 1994, particularly at the higher and lower levels of the scale (Figure 3.10).

Figure 3.10: Queensland APP results, by year level, 1987 to 1994 (percentage of students achieving level)<sup>1</sup>



1 Student performance is shown as the percentage of students who achieve a level of skills and knowledge on a learning continuum increasing from Level 1 to Level 5. The scale is described in terms of the kind of skills/processes/knowledge that characteristically typify the different levels.

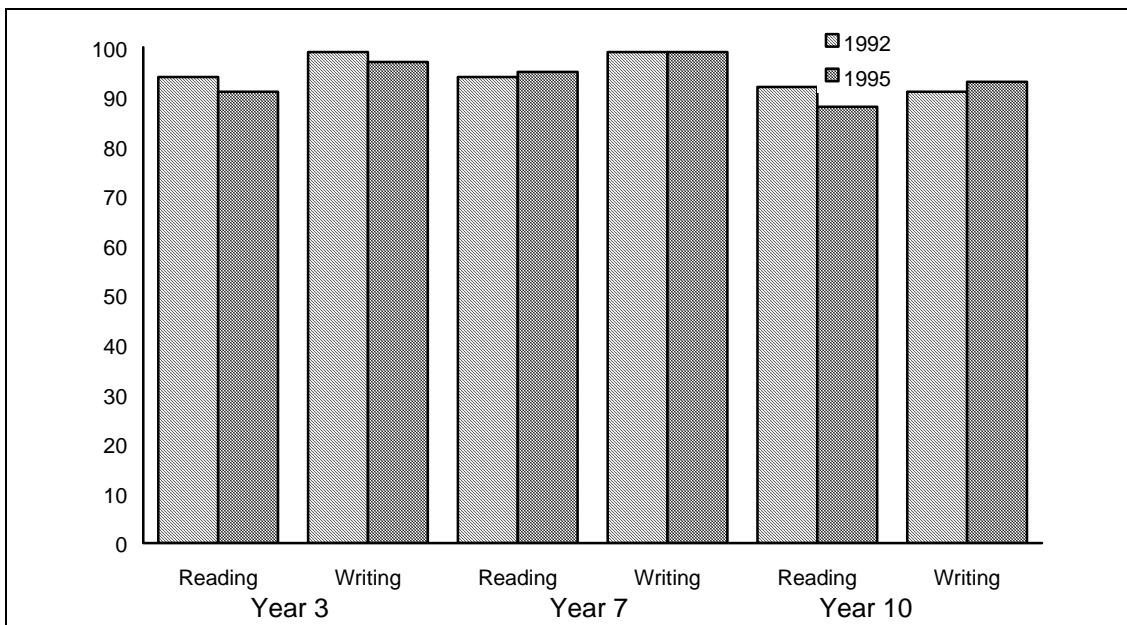
Source: Table 3A.28

*West Australian Monitoring Standards in Education*

Since 1990, the WA Monitoring Standards in Education (MSE) project has tested performance in a range of curriculum areas for a sample of students in Years 3, 7 and 10. The standards refer to descriptions of expected student performance expressed in levels, with particular levels specified for year groups in each subject.<sup>7</sup>

New results which were comparable with previous testing became available in 1996 in the areas of reading and writing. These indicated, for all year levels, there was virtually no change in the number of students achieving the specified standard between 1992 and 1995 (Figure 3.11).

Figure 3.11: WA Monitoring Standards results, 1992 and 1995, (percentage of students achieving the specified level)<sup>1</sup>



<sup>1</sup> The specified levels for English (reading and writing) were: ≥ Level 2 for Year 3; ≥ Level 3 for Year 7 and ≥ Level 4 for Year 10.

Source: Table 3A.34

*South Australian Basic Skills Test*

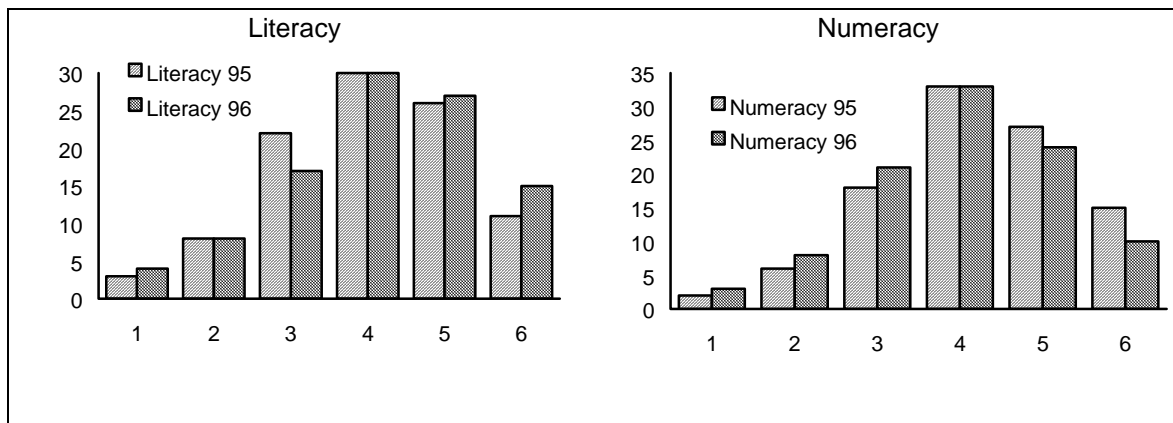
In 1995, initial testing of aspects of literacy and numeracy in Years 3 and 5 was conducted in SA using the Basic Skills Test (BST) jointly developed by NSW and SA.

<sup>7</sup> The specified levels and, thus, the standards achieved for different subjects were not comparable.

Year 5 literacy improved in 1996 relative to levels in the previous year, with the proportion of students achieving the top skill levels (bands 5 and 6) increasing from 37 per cent to 42 per cent. Numeracy declined over the same period, with the proportion of students achieving the top skill levels decreasing from 42 per cent to 34 per cent (Figure 3.12).<sup>8</sup>

Trial collections of learning outcomes in the form of profile levels within key learning areas were also commenced in 1995.

Figure 3.12: SA Basic Skills Test results, Year 5 students, 1995 and 1996 (percentage of students achieving band)<sup>1</sup>



<sup>1</sup> 1995 data have been adjusted to add two additional bands for Year 5. 1996 data incorporate two additional Bands, Band 5 and Band 6. Bands are consistent from Year 3 to Year 5, that is, the criterion for allocation to Year 3, Band 2 is the same as the criterion for allocation to Year 5, Band 2.

Source: Table 3A.40

### *Tasmanian reading and numeracy tests*

Tasmania has recorded learning outcomes longer than any other state or territory. A rolling program of standardised tests of reading and numeracy skills has been administered to 10 year olds and 14 year olds for the past 20 years.

In 1996, a new assessment regime was introduced. Instead of selecting cohorts to be tested by age, students were selected by year of schooling (Year 5 in 1996). This procedure will be followed in all future monitoring programs. The results of the 1996 test provided evidence of a possible increase in reading skills following a long term decline since 1976.

In 1996, samples of students were assessed in listening, reading, speaking and writing. In order to determine whether the performance of students in reading had changed from 1976 to 1996, data sets containing student responses from

<sup>8</sup> In 1996, SA restructured the BST to incorporate six skill bands. Year 5 data have been adjusted to reflect these new bands.

previous monitoring-program reading tests as well as the data set for the 1996 reading test were analysed. There appeared to be a decline in performance from 1984 to 1993, and an improvement from 1993 to 1996. The 1993 to 1996 improvement, however, should be treated with caution, as the students assessed in 1996 were all Year 5 students independent of their age, and those assessed in previous programs were 10 year old students independent of their year of schooling (Figure 3.13).

Figure 3.13: Tasmanian reading test results, 1976 to 1996 (index)<sup>1</sup>



1 Between 1976 and 1993 reading performance results were for 10 year olds, 1996 results were for students in Year 5.

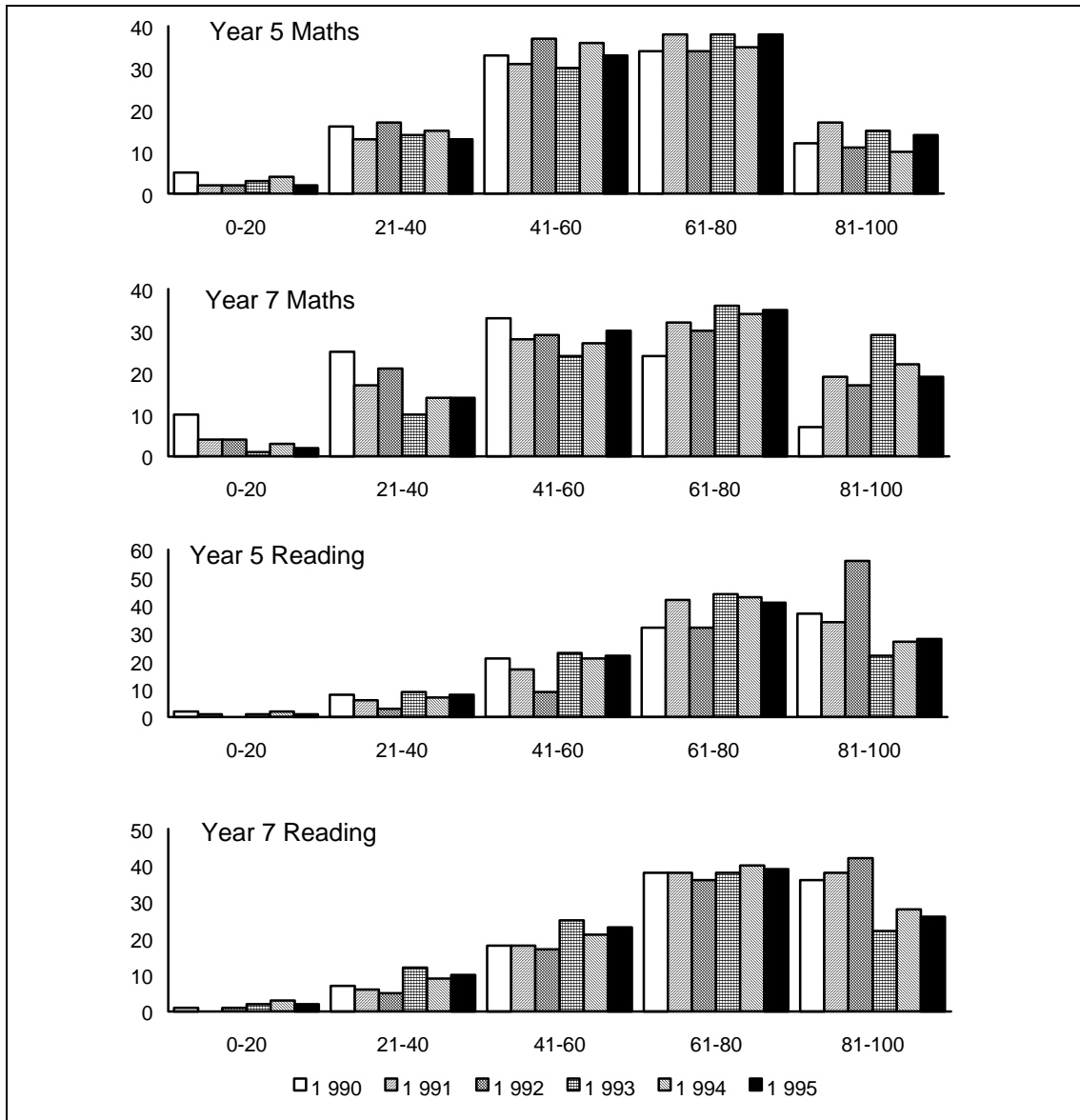
Source: Table 3A.49

### *Northern Territory Multi-level Assessment Program*

The NT Department of Education has collected system-wide data on student achievement in reading and mathematics for Years 5 and 7 under the Multi-level Assessment Program (MAP) since 1990. The 1995 results for Year 5 maths exhibit a fairly similar distribution to previous years. Over the past 6 years, however, the NT has achieved a sustained increase in the proportion Year 7 maths students scoring between 61 and 80 out of 100 and a compensating decrease in students scoring between 0 and 40. A similar increase in the highest scores (81 to 100), has more recently tailed off.

In reading skills, at both the Year 5 and Year 7 levels, the last three years have seen a deterioration in skill levels. This is demonstrated by increases in the proportion of students scoring between 21 and 60, while the proportion of students in the highest skilled group has decreased. The proportion in the lowest quintile (between 0 and 20) however, has not increased observably (Figure 3.14).

Figure 3.14: NT Multi-level Assessment Program results, 1990 to 1995, (percentage of students in marks range)



Source: Table 3A.62

### 3.6.5 Other objectives

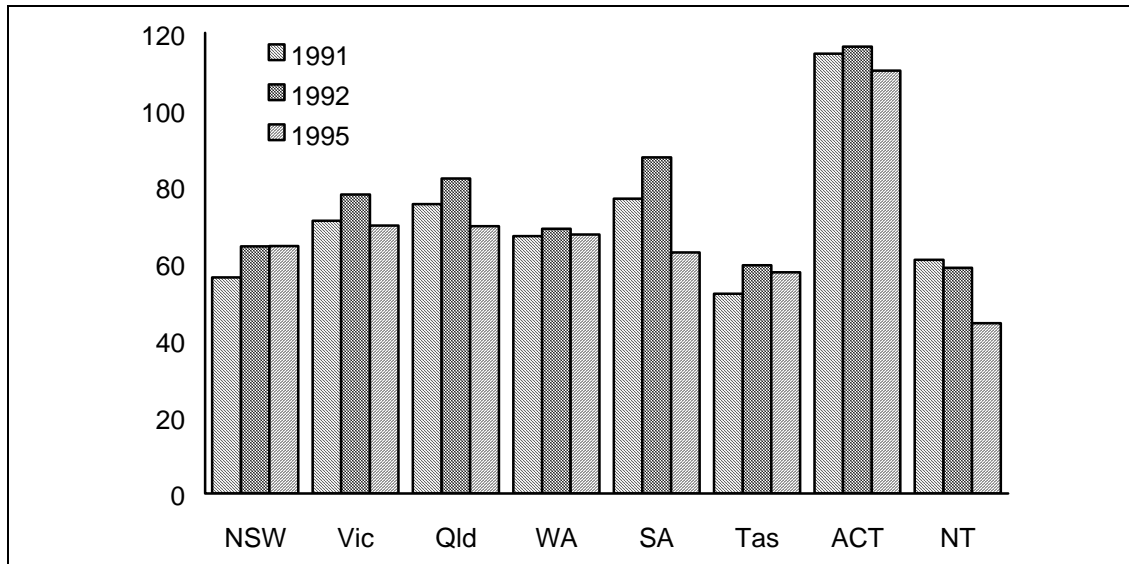
There was little information with which to assess the performance of schools in meeting social and other objectives. Indicators which were available, such as apparent retention rates, were relevant for both learning outcomes and social objectives.

*Student retention*

School retention rates are influenced by student perceptions of the benefits of schooling. However, they are also affected by the alternative work force and non-school education opportunities (like availability of TAFE places), by movements of students between the government and non-government sectors and by interstate and overseas migration. Thus short term changes in apparent retention rates should be interpreted with care.

The proportion of young people remaining to Year 12 increased from approximately one-third at the beginning of the 1980s to a peak of 77 per cent in 1992. Since then it has fallen annually, dropping to 72 per cent in 1995. Falls in retention rates have not been uniform across all states and territories. The falls have been largest in SA (88 per cent in 1992 to 63 per cent in 1995), Queensland (85 per cent to 70 per cent) and the NT (59 per cent to 44 per cent)(Figure 3.15). Some of this decline has been attributable to structural factors such as recent changes to certification processes. Other factors include changes to labour market conditions and training opportunities. In the case of the NT the decline in apparent retention is associated with the inclusion of ungraded Aboriginal and Torres Strait Islander students in Year 8. Retention rates of greater than 100 per cent in the ACT reflect the transfer of students from non-government schools to government colleges to complete their senior secondary education.

Figure 3.15: Apparent retention rates in government schools, 1991, 1992 and 1995 (per cent)<sup>1</sup>



<sup>1</sup> Apparent retention rates were slightly understated for jurisdictions with significant numbers of part time students. The numbers and full time equivalent of part time students in 1995 in each jurisdiction are in Table 3A.1  
 Source: Table 3A.4

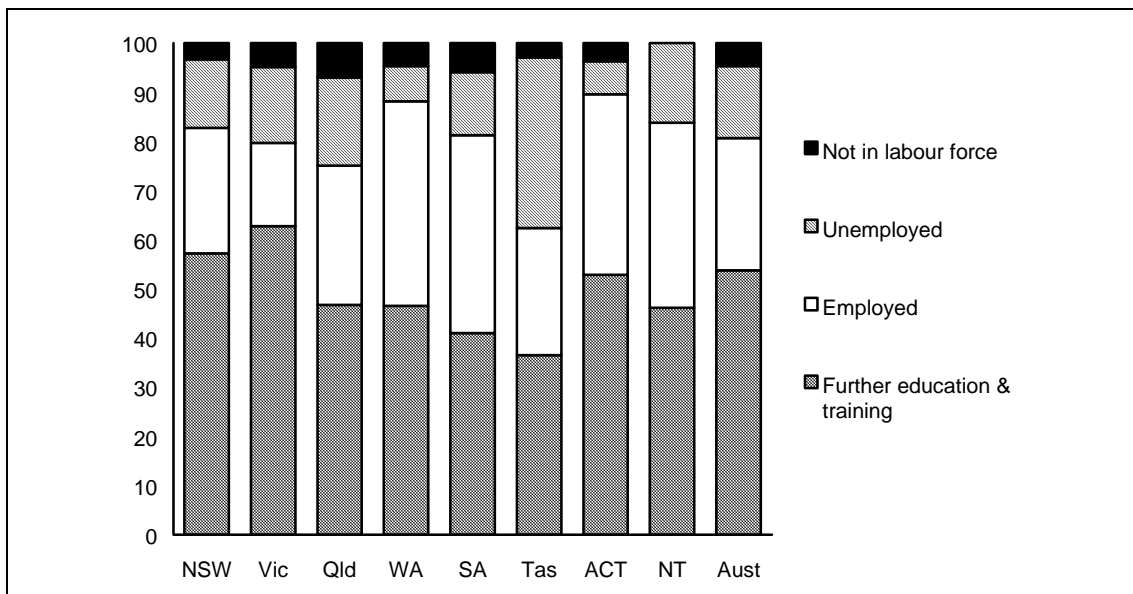
Student attendance is also linked to both learning and social outcomes objectives of schools. Attendance data was collected by a number of jurisdictions but it is not comparable.

### *Transition from education to work*

The distribution in the work force and further education of students who left government and non government schools in 1994 varied across jurisdictions. Victoria had the highest proportion of school leavers who went on to further education (63 per cent) and Tasmania the lowest (37 per cent). About 27 per cent of school leavers went on to employment across Australia — the highest proportions were in WA and SA (around 40 per cent) and the lowest in Victoria (17 per cent). Tasmania had the highest proportion of school leavers who were not employed (35 per cent), and WA and the ACT had the lowest proportion on unemployed school leavers (around 7 per cent) (Figure 3.16).

The variation in the destinations of school leavers across Australia reflected labour market conditions as well as the value placed on, and availability of, further education and training.

Figure 3.16: Destination of school leavers, May 1995 (per cent)<sup>1</sup>



<sup>1</sup> Students in further education and training included all students undertaking a course of at least 1 semester duration, it also included all students regardless of their labour force status. These students have been excluded from the labour force categories.

Source: Table 3A.6

### 3.6.6 Equity objectives

Equity objectives were assessed in terms of outcomes for priority groups such as:

- completion rates;
- retention and participation rates; and
- learning outcomes.

Ideally, comparisons should be between outcomes for priority groups for individual jurisdictions but these are not generally available. To give an indication of recent trends where jurisdictional data were not available, annual national data are presented where possible.

#### *Year 12 completion rates*

Completion rates were estimated by comparing the number of Year 12 completions<sup>9</sup> with the estimated populations that could have attended Year 12 in that calendar year.

No jurisdictional data on completion rates for priority groups were available. The national completion rate for students generally increased between 1989 and 1994, although it was relatively stable in the most recent years (Figure 3.17).

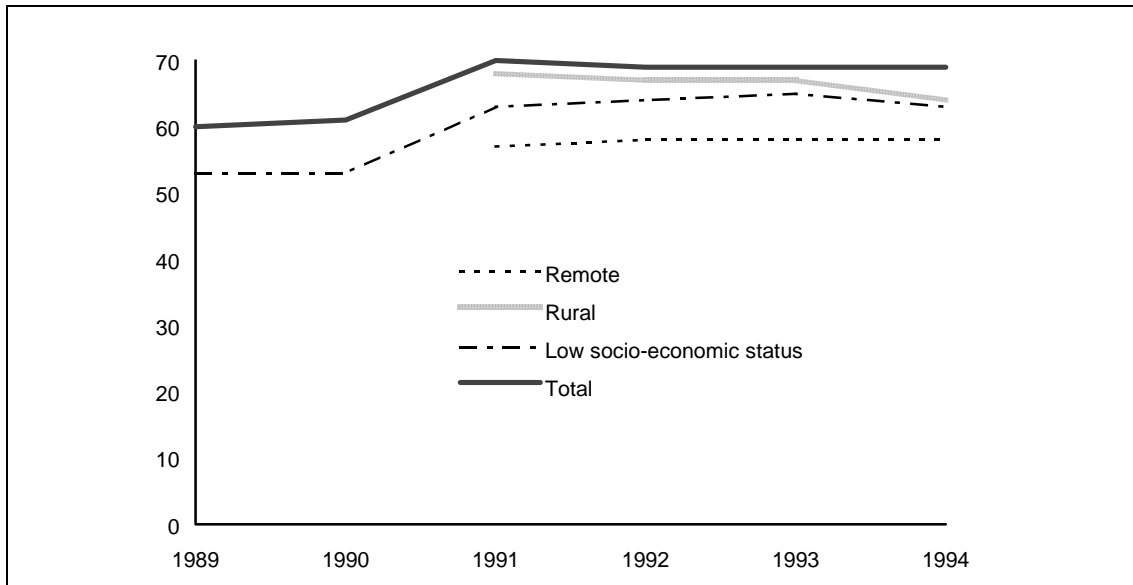
Completion rates for rural and remote students were consistently below those for other students. In addition, the difference between the rate for rural students and other students increased over that time (Figure 3.17).

There was also a significant gap between the completion rates for students from the low socio economic deciles and the population as a whole. The gap was 8 percentage points in 1990, 4 percentage points in 1993 and 6 percentage points in 1994 (Figure 3.17).

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<sup>9</sup> Year 12 certificates issued by the education authority.

Figure 3.17: Estimated Year 12 completion rates by locality and socioeconomic status, 1989 to 1994, (per cent)<sup>1,2,3</sup>



1 Definitions of urban, rural and remote were based on the Rural, Remote and Metropolitan Areas Classification developed by the Department of Primary Industries and Energy. These figures are subject to finalisation of 1994 estimated resident population.

2 The remote category comprised only approximately 3 per cent of the 15 to 19 year old population in 1994 and, as a result, relatively small changes in the estimated resident population or in the number of completions annually could lead to apparently substantial changes in the completion rates from year to year.

3 From 1991, the ABS Index of Education and Occupation was used to calculate socioeconomic status on the basis of postcode of the students' home addresses; previously socioeconomic status was based on a specialised index developed by the ABS for DEET. 'Low' socioeconomic status was the average of the lowest three deciles and 'High' was the average of the top three deciles. These figures are subject to finalisation of the 1994 estimated resident population.

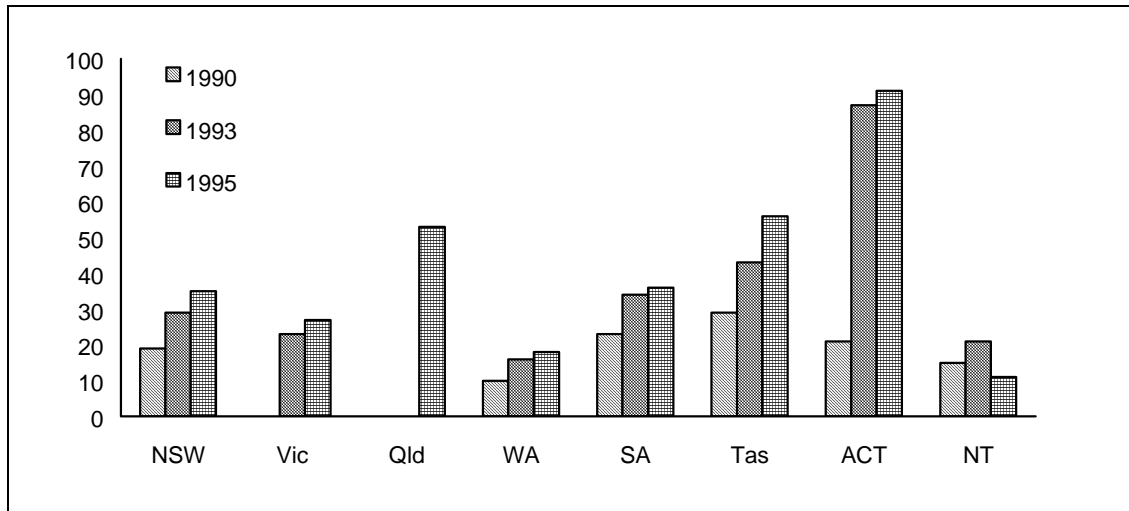
Source: Table 3A.7

### *Retention and participation rates*

Aboriginal and Torres Strait Islander students were the only priority group for which comparable apparent retention rates were generally available. Their apparent retention rates for Year 12 were available for most jurisdictions for the 1990s, although in some cases the data could be distorted as a result of the small numbers involved.

All jurisdictions for which data were available, with the exception of the NT, recorded increases in apparent retention of Aboriginal and Torres Strait Islander students in recent years. In 1995, the highest apparent retentions were in the ACT, Tasmania and Queensland, and the lowest were in the NT, WA and Victoria (Figure 3.18). Relatively small numbers of Aboriginal and Torres Strait Islander students in SA, Tasmania, Victoria and ACT mean that the apparent retention rates should be interpreted with care.

Figure 3.18: Apparent retention rates to Year 12 for Aboriginal and Torres Strait Islander students, 1990, 1993 and 1995 (per cent)<sup>1</sup>



1 Relatively small numbers of Aboriginal and Torres Strait Islander students in SA, Tasmania, Victoria and ACT mean that the apparent retention rates should be interpreted with care.

Sources: Table 3A.8

No comparable jurisdictional data or national trend data for participation by other priority groups were available.

### *Learning outcomes*

#### *National surveys*

The joint ACER/Commonwealth Government longitudinal survey of Australian youth suggests that, over the past 20 years, there has been no change in the literacy levels of students from homes in which English was not the main language used (Kemp 1996). These students, on average, did not perform as well in both literacy and numeracy as students who spoke mostly English at home. Students from lower socioeconomic backgrounds also generally scored relatively lower on the literacy and numeracy tests.

The National Schools English Literacy Survey will provide information in April 1997 on the literacy achievements of major sub-groups — Aboriginal and Torres Strait Islander students, students from a non English speaking background, students from a low socio-economic background and from rural and isolated areas — by gender.

### **3.6.7 Efficiency**

The efficiency measures reported are:

- expenditure per student; and
- students per full-time equivalent staff.

To reflect the different resource requirements of schools in different operating environments, data have been disaggregated by school size, location and the socioeconomic status of students where possible. Chapter 2 has a more detailed discussion of the issues which need to be considered when measuring efficiency in service provision.

#### *Expenditure per student*

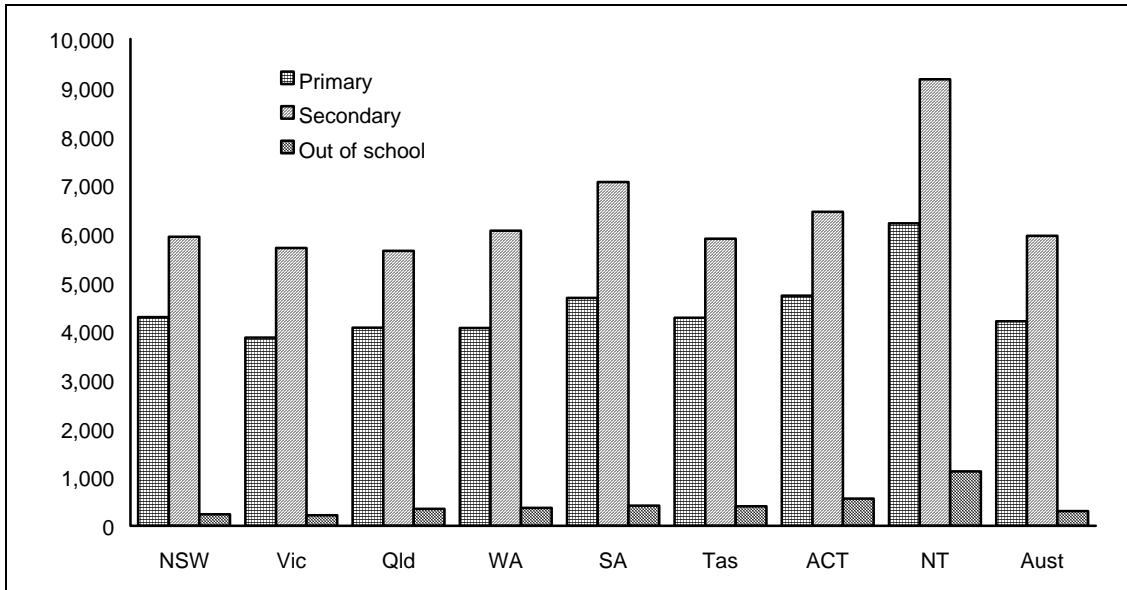
The expenditure reported is that of the State and Territory School Education Departments on government schools. Expenditure by these departments on non-government schools, and contributions by parents through school fees have been excluded.

The interstate relativities among jurisdictions of average expenditure per full time primary and secondary student were consistent: the NT had the highest expenditure per student in both categories, followed by the ACT, SA and NSW. Expenditure per secondary student ranged from \$5648 in Queensland to \$9900 in the NT. Expenditure per primary student ranged from \$3869 in Victoria to \$6210 in the NT. Out of school expenditure also varied widely, with Victoria spending the least (\$220) and the NT the most (\$1115) (Figure 3.19).

Expenditure data disaggregated by school size, socio economic status of students provided by some states and territories continued to show that:

- average expenditure per student in schools classified as being relatively disadvantaged was higher; and
- average expenditure per student generally fell as school size increased.

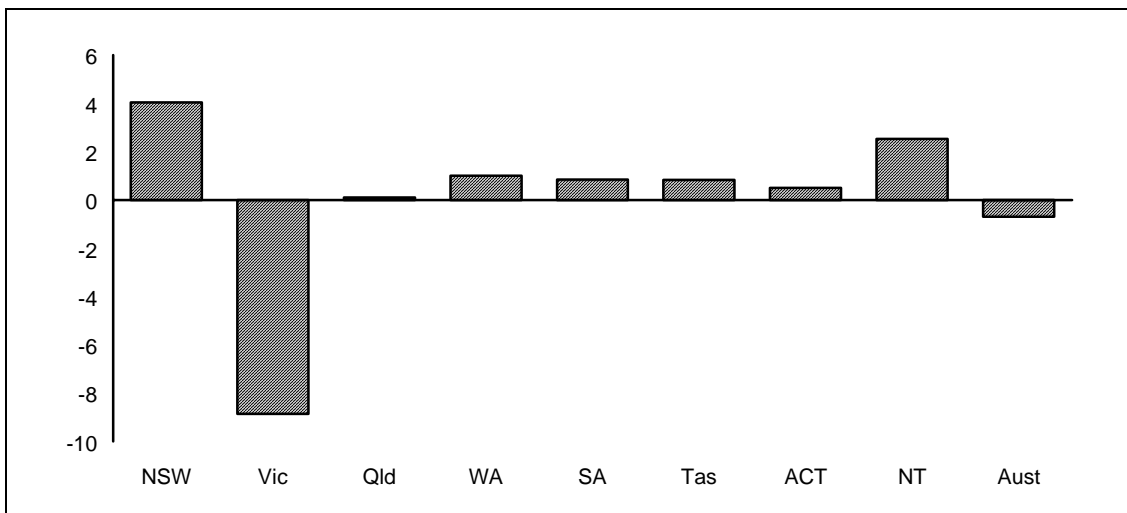
Figure 3.19: Average education expenditure per student, 1994–95, (\$) <sup>1</sup>



<sup>1</sup> Expenditure per student were slightly overstated for jurisdictions with significant numbers of part time students. The numbers and full time equivalent of part time students in each jurisdiction are in Table 3A.1  
 Source: Table 3A.7

Expenditure per student (in real terms) decreased by 0.7 per cent across Australia between 1992–93 and 1994–95. On a jurisdictional basis, the largest increase (4.0 per cent per annum) was in NSW, the largest decrease was in Victoria (8.9 per cent per annum) (Figure 3.20).

Figure 3.20: Annual average change in real expenditure per student, 1992–93 to 1994–95, (per cent)

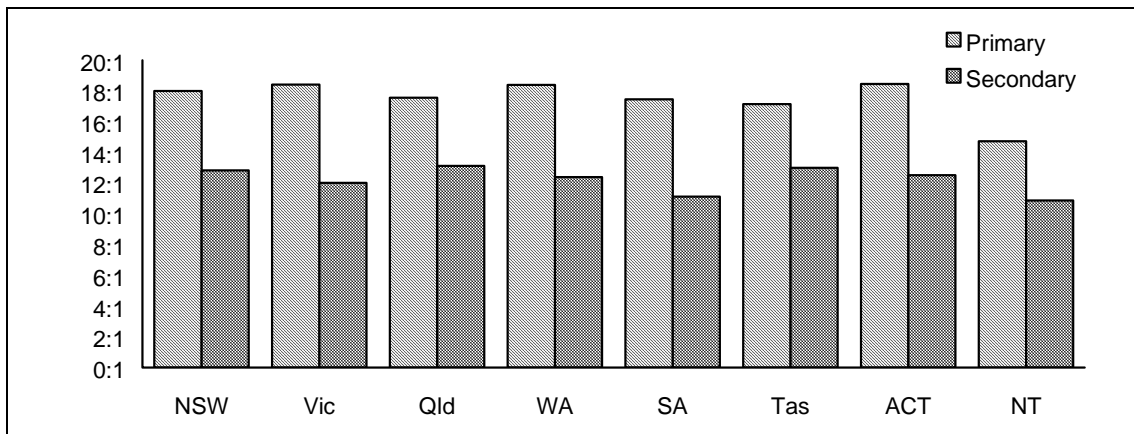


Sources: Tables 3A.15, 3A.22, 3A.29, 3A.35, 3A.41, 3A.50, 3A.58, 3A.63

### *Students per full time equivalent teacher*

The ratio of students to full time equivalent (FTE) teachers did not vary significantly among jurisdictions. The student teacher ratio in secondary schools averaged approximately 12 to 1. For primary schools the ratio was about 18 to 1 — the exception was the NT, which had an average student teacher ratio of only 15 to 1 in its primary schools (Figure 3.21).

Figure 3.21: Student teacher ratios, 1995 (students per FTE teacher)



Source: Table 3A.9

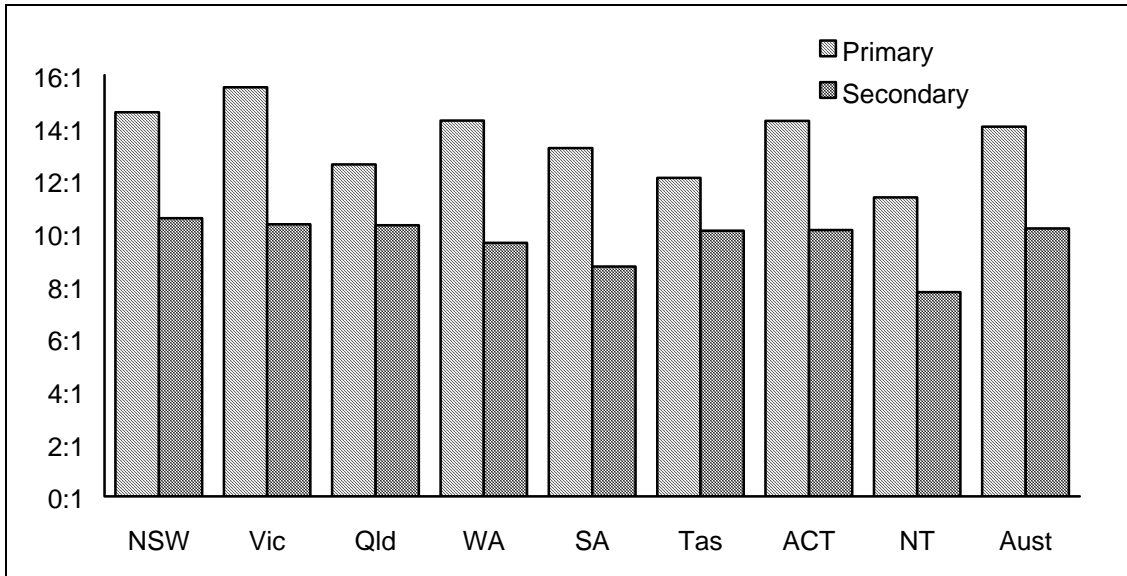
### *Students per full-time equivalent staff*

The ratio of students per staff member varied more than the student per teacher ratio, reflecting different patterns of non-teaching staff levels. In 1995, for primary schools, the ratio of students to staff was highest in Victoria (15.5 students to 1) and lowest in the NT (11.4 to 1). In secondary schools, the ratios were around 10 students per staff member, with the exceptions of SA (8.7 to 1) and the NT (7.8 to 1) (Figure 3.22).

Disaggregated data for some states and territories showed that:

- the number of students per staff member generally increased with school size; and
- the number of students per staff member was generally lower in schools classified as being relatively disadvantaged.

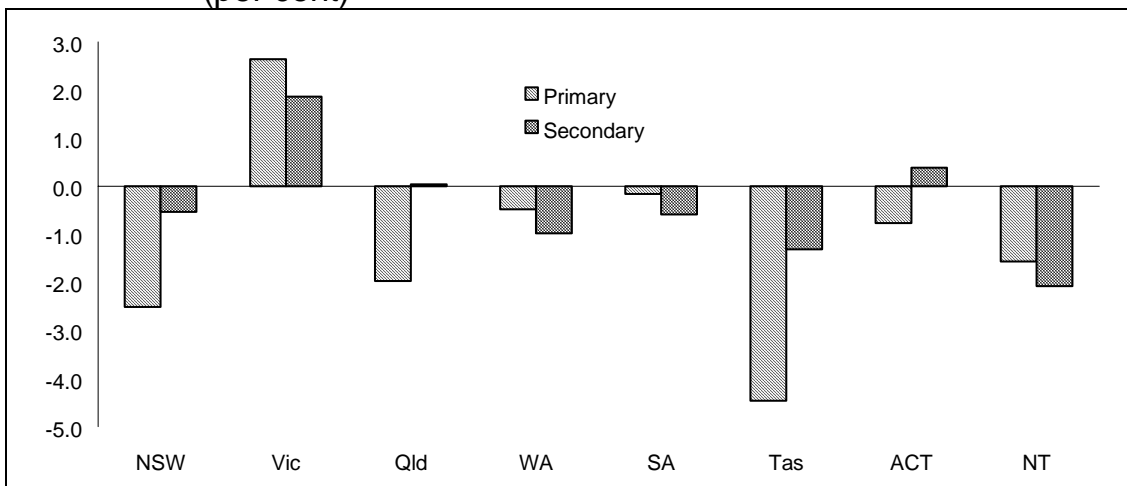
Figure 3.22: Student staff ratios, 1995 (students per FTE staff)



Source: Table 3A.10

The ratio of students per FTE staff member changed considerably across states and territories between 1991 and 1995. The ratio of students per staff has decreased at the primary and secondary level in all jurisdictions, with the exception of secondary schools in the ACT (which increased by 0.4 per cent) and secondary and primary schools in Victoria (which increased by 1.9 and 2.7 per cent, respectively). Tasmania had the largest reduction in the ratio of students per staff of 4.5 per cent for primary students per staff member, followed by NSW with a drop of 2.5 per cent (Figure 3.23).

Figure 3.23: Average annual change in student-staff ratios, 1991 to 1995 (per cent)



Source:: Table 3A.10