

# TASMANIA

## Introduction

In Tasmania, the *Education Act 1994* legislates compulsory schooling for all children from the age of 6 years to 16 years through attendance at a school appropriate to the child's needs or through registered home education.

Schooling is provided through government, independent and Catholic (systemic and non-systemic) schools from kindergarten to year 12. Compulsory schooling starts at year 1.

In 1996, activities in Tasmania were overshadowed by the Port Arthur tragedy which occurred in April. This gave rise to many sensitive and thoughtful responses initiated by all sectors of the education community, as well as requiring considerable professional expertise, both in the immediate aftermath and on an ongoing basis.

## Government schools

The Department of Education, Community and Cultural Development (DECCD) administered 234 government schools providing education for 71,043 students from kindergarten to year 12. Of these 39.1 per cent (27,890 students) received Student Assistance Support to cover the costs of school books and compulsory levies, an increase of 3.1 per cent over 1995 figures. As well, Early Special Education Services provided specialist educational intervention to 322 children between birth and age five years and their families.

## Catholic schools

In 1996, there were 7,501 primary, 4,433 secondary and 1,433 senior-secondary students in 37 Catholic schools. The types of school comprised 25 primary, five primary/secondary, two secondary, one primary/secondary/senior secondary, three secondary/senior secondary and one senior secondary Catholic school.

## Independent schools

In 1996, there were 3,147 primary, 3,390 secondary, and 1,113 senior secondary students in 32 independent schools comprising 21 primary and 11 K–12 schools. One special school caters for students with autism.

## Resourcing

### Recurrent expenditure

#### Government schools

In the year 1995/96, the government spent a total of \$320.6 million on education. Of this \$282.1 million was spent directly on schools, with a further \$34.2 million spent on support programs including special purpose equity programs, student support services, distance education and support for students with disabilities. During 1996, the Commonwealth contributed \$32.9 million to the recurrent funding of Tasmania's government schools. This figure included all special purpose payments.

#### Catholic schools

In the year 1995/96, Catholic schools in Tasmania received \$27.9 million in Commonwealth recurrent funding. Additional funding received is shown in Table 88.

#### Independent schools

In the year 1995/96, in addition to recurrent funding, of \$10.9 million independent schools in Tasmania received funding as shown in Table 89.

### Capital expenditure

#### Government schools

In 1996, the Commonwealth provided \$6.1 million towards capital projects in Tasmania.

**Table 88. Commonwealth grants to Catholic schools, Tasmania, 1996**

<i>Program</i>	<i>\$</i>
AESIP	188,328
Country Areas	29,004
Disabled Students	32,306
Disadvantaged Schools	131,025
Early Literacy	24,552
ESL	159,108
NALSAS	84,901
New Arrivals	23,936
NPDP	63,342
Priority Languages	2,705
Special Education	289,890
STAR	45,005

*Source:* Catholic Education Office, Tasmania

**Table 89. Commonwealth grants to independent schools, Tasmania, 1996**

<i>Program</i>	<i>\$</i>
Community Languages	0
Country Areas	0
Disadvantaged Schools	3,000
Early Literacy	7,900
ESL	39,000
NALSAS	37,107
New Arrivals	14,960
NPDP	29,925
Priority Languages	35,636
Special Education	144,900
STAR	37,000

*Source:* Association of Independent Schools of Tasmania

Of the eight projects funded by the Commonwealth and completed both physically and financially during 1996, the most common types of work undertaken and facilities provided were the provision of new classroom facilities for primary and infant classes in primary schools and the redevelopment of existing accommodation to provide additional teaching spaces. Work was also undertaken in primary schools to provide for the upgrading and redeveloping of library facilities, general purpose rooms and administration areas.

## Catholic schools

The Commonwealth provided \$1.76 million towards capital projects in Tasmanian Catholic schools of which \$1.2

million was allocated to General Support and \$549,477 provided for QCATS. Funds were allocated to the construction of administration, library, canteen, home economics and corridor spaces in the last stage of construction of a new secondary school.

## Independent schools

In 1996, the Commonwealth provided \$793,139 towards capital projects in the Tasmanian independent sector. This included \$256,987 to help broaden the secondary curriculum and implement the Finn and Carmichael Reports (QCATS). Examples of the 13 capital projects funded by the Commonwealth and completed both physically and financially during 1996, were the provision of electronic information systems, provision for library/design/home economics and technical work areas, and the upgrading of hall/amenities and resources areas.

# Major initiatives

## Government schools

### Critical incidents

The development of critical incident plans at State and district level, together with prior staff training, allowed DECCD to respond immediately to the Port Arthur tragedy. High levels of support were provided in the school most affected from the day after the tragedy and extra support is still in place. In addition, DECCD undertook a number of activities at state and district level including provision of regular bulletins to schools, critical incident debriefing to those involved in providing support, individual counselling to students and staff in various schools throughout the State who were directly or indirectly involved, liaison with other departments and organisation and coordination of commemorative events. From June 1996, an ongoing management plan was established.

## Literacy

Support for literacy in the early years of schooling continued, with the employment of extra teachers to extend literacy support into year 2. The first stage of the evaluation of the year 2 literacy support program was carried out with a sample of 885 year 3 students, who had received no extra literacy support, completing a set of

**Table 90. Year 5 students' performance in literacy, Tasmania, 1996**

<i>Strand</i>	<i>Maximum possible score</i>	<i>Measures of central tendency</i>			<i>Measures of dispersion</i>		
		<i>Mean</i>	<i>Median</i>	<i>Mode</i>	<i>SD</i>	<i>Range of middle 50% scores</i>	<i>Range of all scores</i>
Listening	25	11.7	11.5	11.0	4.9	8.0–15.0	0–25
Reading	28	15.1	16.0	17.0	6.7	11.0–20.0	0–28
Speaking - Content	5	3.0	3.0	3.0	0.9	2.0–4.0	0–5
Speaking - Performance	5	2.8	3.0	2.0	0.9	2.0–3.0	0–5
Speaking - Total	10	5.8	6.0	4.0	1.7	4.0–7.0	0–10
Writing - Content	10	6.2	6.0	6.0	1.7	5.0–7.0	0–10
Writing - Language	10	5.7	6.0	6.0	1.8	4.0–7.0	0–10
Writing - On balance	10	5.8	6.0	6.0	1.9	4.0–7.0	0–10

Source: Department of Education, Community and Cultural Development

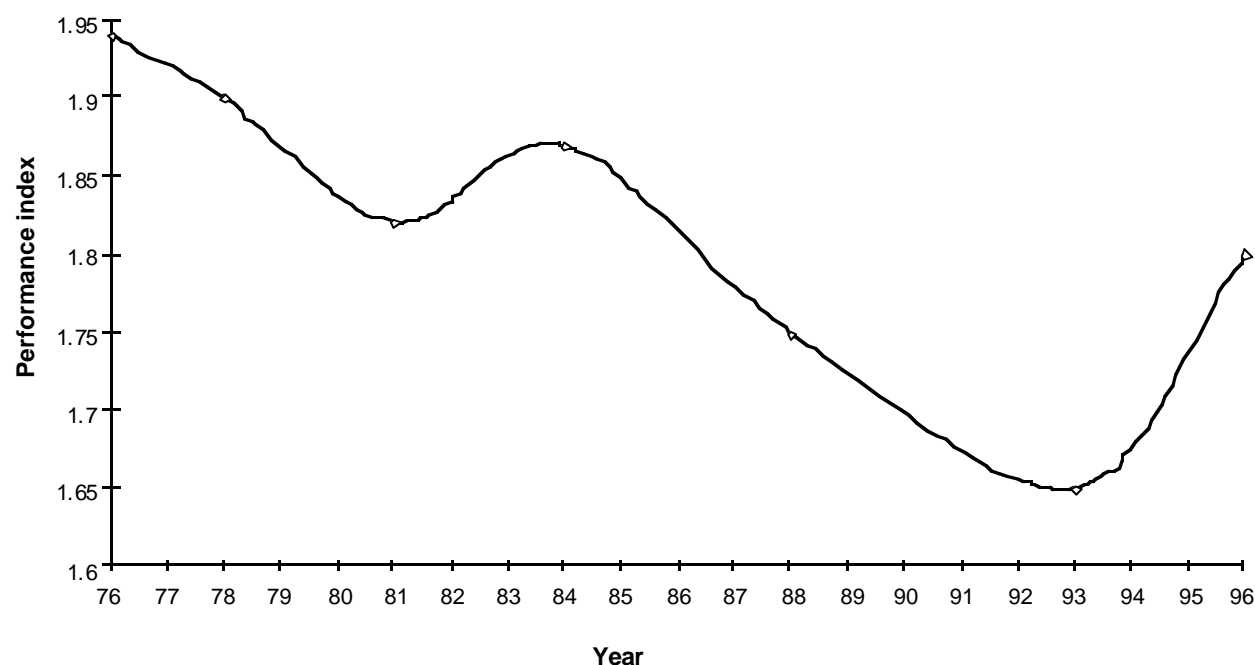
assessment tasks administered on a one-to-one basis by a guidance officer. This will provide baseline data for the evaluation.

## Student learning outcomes

Year 5 students' achievement in literacy was monitored using *DART English* (ACER). A sample of students performed tasks in reading, writing, listening and

speaking, with each student completing tasks in two strands. Overall results are summarised in Table 90.

Longitudinal comparison of the results from previous DECCD monitoring programs (10R tests) indicate that an apparent downward trend in reading has been reversed, despite differences in the cohort, the type of test and the time of year that the test was given. Results are shown in Figure 17.

**Figure 17. Year 5 students' performance in reading from 1976 to 1996, Tasmania**

Note: Performance from 1976–1993 is for 10 year olds measured by 10R tests. Performance in 1996 is for year 5 students measured by DART Reading Test (Form A).

Source: Department of Education, Community and Cultural Development

## **Key intended literacy outcomes (KILOs)**

The KILOs are a set of standards defining expected literacy outcomes in reading and writing at the end of each two years of schooling from K/P to years 7/8. DECCD published further support material in 1996, particularly focused on reading and writing in years 7 and 8. Work commenced on support material for speaking and listening.

## **Parent involvement**

In keeping with DECCD's commitment to parent involvement, the booklet, *Parent Information*, was produced and distributed to 50,000 families of students in government schools. This booklet included information on matters of interest to parents including support available to students, discipline matters, attendance, the curriculum and reporting processes. A policy on Reporting to Parents was finalised after considerable consultation, and was published together with support materials for teachers.

## **Early years of schooling**

A major initiative announced in 1996 for implementation from 1997 onwards was the Flying Start program. This program will provide 130 extra teachers in Prep–2 classrooms to provide extra support in the areas of literacy, numeracy and social skills. Planning commenced for the implementation of a parent support and professional development program based in the seven districts, and for an evaluation of the effectiveness of the program based on student learning outcomes.

## **Secondary schooling**

A major initiative announced for high schools was MARSSS – Managing and Retaining Secondary Students at School. An extra 33 teachers will be provided from the start of 1997 to implement school-based programs to address the needs of those students most at risk of leaving school early. Planning for the implementation and evaluation of these programs commenced in the second half of 1996.

## **Catholic schools**

Particular initiatives undertaken included work on middle schooling issues with emphasis on how students learn and ways of maximising learning for years 5–8. In conjunction with the Association of Independent Schools of Tasmania, some Catholic schools were involved in Assessment Roundtables with emphases on testing, appraisal, recording, portfolios and reporting. This

was an NPDP-funded activity organised through the Tasmanian Educational Consortium. Key teachers from both independent and Catholic schools gathered information about assessment and reporting practice from staff, parents and students at their schools. This was shared at a series of discussions with representatives from the systems and an academic associate from the University of Tasmania.

## **Literacy**

In the early years of schooling, the First Steps literacy program was used with emphasis on spelling and integrated curriculum. Students were pre-tested to establish a target group for intervention and post-tested for evaluation. Teachers assessed preparatory classes using the Early Years Easy Screen (EYES), and year 1 students using the Middle Infant Screening Test (MIST). This allowed year 1 teachers to monitor the target group from 1995 and to identify other children in need of literacy support. There are four areas in the First Steps literacy program—reading, writing, spelling and oral language, each with a developmental continuum attached to it for linking teaching strategies with assessment results. These continua were introduced to schools and teachers were encouraged to adopt this form of assessment and monitoring with students from year 1 onwards.

Professional development targeting oral language and spelling explored the theoretical and practical issues of teaching oral language in the early years of school. Participants were taught the basics of using the First Steps literacy program with follow-up school-based support available throughout the year.

## **Independent schools**

### **Teachers and teaching**

Professional development of staff continued to be a high priority in all schools. The NPDP initiative proved to be very helpful. Teachers indicated that they wanted assistance with practice in innovative teaching methods and exposure to the successful practice of other teachers. A number sought to upgrade their qualifications and others focused on development of leadership potential.

Time to attend available professional developmental activities was regarded as a difficulty.

Within schools, assessment of teaching and learning included peer reviews, observations and term assessments. The induction of new teachers was a priority.

# Initiatives and outcomes relating to special student groups

## Bursaries

Schools sought to provide bursaries for students who were socioeconomically disadvantaged. They also provided extra reference materials and computing facilities to these students. Such strategies were found to be successful in terms of enhanced learning outcomes.

## Indigenous students

Schools with significant proportions of Indigenous students sought to enhance the students' appreciation for and knowledge about their culture, heritage and identity. As a result there was increased community support for the educational process, improved Indigenous students' self-esteem, and non-Indigenous students were encouraged to be more aware of Aboriginal community needs and values.

## Gifted and talented

Some schools had programs for gifted and talented students. Others did not seek to single out students in this way but preferred to focus on the individual strengths using enrichment, extension and excursions to provide added stimulus. Some schools used mixed age groups which provided an opportunity for gifted students to work at their own individual level without being singled out.

## Parental and community involvement

Schools involved parents or the local community in providing education for special student populations. This involvement often focused on assistance with literacy programs such as the Macquarie Reading Program, spelling and numeracy.

## School to work

In the latter part of 1996, in response to the Commonwealth Government's School To Work initiative, a survey of all secondary schools was undertaken to ascertain current involvement of schools in this curriculum area. This will form the basis of extensive programs in 1997.

# Equity initiatives

## Government schools

### Gender

Gender equity continued as a DECCD priority. Gender equity officers worked with schools in all seven education districts to implement the DECCD Gender Equity Plan, embedding gender equity principles in teaching practice and developing classroom strategies to help students focus on gender issues.

### Students with disabilities

DECCD is committed to a policy of including students with disabilities in regular schools. In 1996, nearly 250 students with significant disabilities were enrolled in regular schools, with a similar number in special schools.

Support for this policy was provided in the form of a three-day intensive workshop for 80 school principals, support staff based in education districts who worked with teachers to develop curricula for students with disabilities in their classes, and provision of computer hardware, software and concept keyboards on loan to students requiring this support. The resourcing model used to establish staffing and funding levels was revised and will be monitored to ensure equitable and effective use of resources. A research project undertaken at an urban high school had two strands: firstly, provision of multilayered curriculum materials in SOSE, and secondly trialling of a model of in-school support teams. Findings from this research will inform planning for students' future needs.

A draft disability service plan, as required under the *Commonwealth Disability Discrimination Act 1992*, was completed and is now undergoing community consultation.

*Tasmanian students with disabilities are integrated into regular classes and use technology to overcome disadvantage.*

**Table 91. Performance of year 5 students against the national profile levels, Tasmania, 1996**

Profile level	Reading				Writing				Speaking				Listening			
	ATSI		Non-ATSI		ATSI		Non-ATSI		ATSI		Non-ATSI		ATSI		Non-ATSI	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<2	16	11	136	6	10	6	122	5	7	5	46	2	6	4	56	3
2	8	6	125	5	27	17	228	10	49	32	503	23	21	16	263	12
2-3	9	6	90	4									19	14	266	12
3	51	36	688	29	75	48	1,016	44	65	42	937	44	8	6	158	7
3-4	25	18	442	19					16	10	310	14	44	33	666	30
4	18	13	464	20	39	25	737	32	15	10	312	15	13	10	136	6
4-5	14	10	311	13									13	10	362	16
5	0	0	108	5	6	4	207	9	2	1	40	2	10	7	295	13

Source: Department of Education, Community and Cultural Development

## Aboriginal education

The Aboriginal Student Development Program was reviewed in 1996. This program provided funding to individual students who were not achieving at the same rate as their peers. As a result of the review, the program was changed to a submission-based program with clear outcomes and evaluation processes identified. The new program also required schools to employ Aboriginal education workers where possible. Ten schools and one support service were successful in obtaining funding to address the needs of primary aged Aboriginal students.

The ABSTART program for secondary Aboriginal students at risk of not completing their education continued to receive community support. Over 40 students participated and of these 80 per cent were retained in school or other forms of education such as traineeships.

A successful cultural program included camps on Big Dog Island, at which students undertook a number of traditional cultural activities, and a major interactive display at the Tasmanian Museum and Art Gallery, coinciding with NAIDOC week.

## Student learning outcomes

Of students in the year 5 Literacy Monitoring Program, 321 or 6.2 per cent identified themselves as Aboriginal persons. Results indicated that mean scores for Aboriginal students for all literacy strands assessed were significantly less than those of non-Aboriginal students. Some differences were apparent across strands, however, when performance of students was matched to national English profile levels, as shown in Table 91.

Although generally under-represented in the higher profile levels, Aboriginal students are mostly performing at or above the expected profile level (level 3) in all strands. Differences between Aboriginal and non-Aboriginal year 5 students are more marked in reading than in the other strands. Interpretation of these results should be treated with caution because of the very small numbers of Aboriginal students involved.

## Language backgrounds other than English

Improved processes were developed to monitor students' progress. These will be implemented in 1997.

## Catholic schools

### Students with disabilities

Students with disabilities in the sensory, social/emotional, intellectual, severe speech and language, physical and multiple categories made up 1.04 per cent of the primary school population.

In English, students' achievement in the lower primary grades came close to the average achievement level for the cohort. However, in the upper primary grades these students were achieving below the cohort level. It would appear that as they progress through the grades they become further disadvantaged by intersecting difficulties. There were some exceptions to the above, for example a highly intelligent visually impaired student achieved consistently at a high level when compared with the cohort. The achievement data for mathematics indicated a similar pattern overall but with a more varied pattern of achievement in the lower grades.

An attempt was made to electronically collect some reliable achievement records for students in these categories but the instrument used did not adequately address all the components required to gather information.

## **Gender and school education**

Six Catholic primary schools and three Catholic secondary schools participated in the ACER research project on Gender and School Education conducted during 1996. Thirty-one primary teachers, 20 secondary teachers, 128 year 6 students and 49 year 10 students completed questionnaires relating to the research.

## **Independent schools**

### **Students with disabilities**

Funding received by 20 schools provided for individual projects for 66 students from K to year 11. The disability categories included intellectual, hearing impaired, vision impaired, physical, social/emotional (including autism), significant language disorder and multiple impairments.

Documentation was maintained on all students which contained details of individual educational programs, implementation and evaluation. NEPS project officers carried out educational assessments on all funded students, focusing on measurable outcomes. They also provided school-based consultancies for teachers and teacher assistants regarding appropriate curricula and management. This has resulted in improved access, participation and achievements for these students.

## **Language backgrounds other than English**

There were nine funded school-based projects involving 30 students including five new arrivals. Teachers of these students participated in a three-day workshop organised by the government sector and which allowed them to become familiar with the ESL scales. The ESL scales were then used to determine both the students' levels of proficiency and to plan appropriate programs.

### **Disadvantaged schools**

Four schools received funding as a result of submissions outlining literacy-based programs. Involvement in the program resulted in improved educational participation, learning outcomes and personal development of young students disadvantaged by socioeconomic circumstances.

## **Students at risk**

Ten secondary schools received funding for projects targeting students with significant literacy problems. Students involved were mainly in year 7. STAR coordinators and teachers attended regional meetings. Networking between schools which receive STAR funding and teachers has been a significant 'spin-off' from this program.

A two-day professional development course, titled Responding to Learning Difficulties: Current Issues and Practical Strategies for the Classroom, was held. This assisted teachers by providing them with appropriate strategies for intervention programs.

Outcomes from this program included better screening strategies, measurable improvements in literacy levels using pre- and post-standardised tests, and an improved understanding of literacy problems and relevant programs.

## **Early literacy**

The Early Literacy Component sought to foster the development of literacy in the early years of schooling (K-3) for students from low socioeconomic backgrounds. Six schools were involved in projects to identify 'at risk' students. Screens, check-lists and tests provided baseline information for individual intervention programs.

School-based professional development centred on facilitating improvements in literacy outcomes and increasing teachers' understanding of the acquisition of literacy skills. Many schools used First Steps Developmental Continua to assist with recognising developmental phases and to place students at appropriate levels.

Early childhood educators explored theoretical and practical issues relating to oral language at sessions led by a lecturer from the University of Tasmania.

## **Curriculum areas**

### **Health and physical education**

Distribution of the report on the Review of Health Education in Tasmanian government schools was followed by extensive consultation regarding the recommendations. From this, a plan for implementation was developed that included the employment of a Health Promoting Schools officer in collaboration with the State Department of Health and Community Services.

*Students enjoy physical activities during the lunch break.*

A joint research study with the University of Tasmania indicated the need for greater emphasis on the acquisition of fundamental motor skills in the primary years of schooling. As a result a comprehensive teacher resource and professional development package is being developed.

The study also considered cardiovascular fitness levels. Addressing this, however, requires broad community support and the best way to obtain this remains an issue.

## **English**

English became a priority learning area in 1996 with the provision of senior curriculum officers in all districts, and the publication of a number of support documents. A Key Teacher professional development program was funded through NPDP funds, and other professional development was organised through professional associations.

Revision of the Tasmanian Certificate of Education (TCE) courses commenced, to bring them in line with the national profile and statement, and to include key competencies.

## **Studies of Society and Environment**

Priority funding was provided for SOSE in 1996 and senior curriculum officers in all districts worked with schools to remodel SOSE programs.

## **The arts**

In 1996, a research project entitled The State of the Arts was undertaken in all Tasmanian government schools. Over 2000 primary and secondary teachers participated in the survey. The information was used to plan for an arts priority program to start in 1997, and to provide baseline information for evaluation. Data collected concerned teacher qualifications, expertise, confidence levels and professional development needs.

The successful Artists in Districts Program continued to place artists in Tasmanian schools and colleges. Significant projects included the development of a school video by primary students, a community-based percussion program, a major puppetry project and a media production project. All types of schools participated, including rural and special schools.

The DECCD continues to support several other programs aimed at providing Tasmanian students with access to quality performing arts programs.

## **Technology**

A group considering the educational uses of information technology produced a series of discussion papers focusing on the educational applications of technology in years K–12. They also conducted a survey to map the availability and use of computers in schools. From these activities a framework and plan for the educational use of information technology by schools was developed.

# **Goals 1,2,4 and 5 Students' attitudes to schooling**

## **Government schools**

### **Major initiatives**

Planning commenced for two new initiatives to start in 1997 that support positive student participation in schooling.

### **Flying Start Program**

This is a support program for students in P–2 that focuses on literacy, numeracy and social skills for all children. An extra 64.5 teachers will be added to the 66 teachers already



employed under the early literacy program to provide intensive teaching for a crucial period each day. The intention is to provide students, particularly at risk students, with a solid foundation in the basic competencies.

### **Managing and Retaining Secondary Students at School**

The MARSSS program targets secondary students whose behaviour is of serious concern and aims to retain these students at school. An additional 33 teacher positions over the current staffing quota will be provided to support this program. Processes for allocation of resources, management and evaluation within districts were organised in 1996, and individual schools planned programs based on the needs of their own students.

### **Other initiatives**

The Tasmanian response to the Commonwealth project for States to conduct forums to present examples of effective ways of dealing with violence in schools was Stepping Stones to Non-Violence in Schools. Sixteen schools presented workshops to 230 participants including representatives of Catholic and independent schools, parents, unions, the University of Tasmania, police and community organisations.

A behaviour management key teacher program provided one key teacher from every government high and district high school with increased knowledge and skills in behaviour management. The program emphasised a whole school behaviour management approach, examined the variety of behaviour management programs currently available and suggested a repertoire of strategies for managing student behaviour that could be passed on to other teachers.

With Victoria, Tasmania participated in a NPDP-funded program, Creating a Supportive School Environment. The program trialled the No Fear kit (DEETYA) that provides a curriculum and professional development package to examine the gendered nature of violence. Seven gender curriculum officers were trained to work with teachers and principals from 45 selected schools throughout the state. Over one hundred teachers attended the five workshops. The impact and outcomes for Tasmanian schools will be followed up through the continued involvement of school support staff in districts.

### **Ongoing programs**

The Peer Support Program continued to operate in over 40 schools. This program encourages positive relationships

within a school and its community and helps reduce negative peer pressure. It is supported by a network of 18 teachers and guidance officers Statewide who provide training to teachers in all schools.

The Kindergarten Development Check provides an early screen for children at risk. All students are assessed during their first term in kindergarten and appropriate intervention strategies are implemented if needed. In 1996, this check which includes social behaviour and play, was fully implemented for all kindergarten children.

In response to the Tasmanian *Education Act 1994*, DECCD provided guidelines for discipline sanctions, enrolment and attendance to all schools. The guidelines specify the processes to be followed where a disciplinary sanction is under consideration and details the responsibilities of schools and parents in such circumstances. This has given school principals a greater range of options to deal with students whose behaviour is unacceptable.

### **Postcompulsory years**

In 1996, 70 AVTS programs, incorporating key competencies, were available to students in years 11 and 12. An estimated 15 per cent of all senior secondary students participated.

Joint curriculum development commenced with 12 of Tasmania's 15 Industry Training Advisory Boards. Most placements were in the areas of retail, office, hospitality and tourism industries, but industries as diverse as forestry, arts, entertainment and soft furnishing were also included.

### **Catholic schools**

#### **Ongoing programs**

Schools continued to run a number of programs that support the social outcomes of schooling. Some new initiatives were introduced across the primary and secondary schools in response to the trauma resulting from the Port Arthur tragedy. There were also cooperative ventures across the three sectors involving health and social agencies at all levels.

In the primary schools, attention was given to the development of life skills through a variety of programs. These included behaviour management programs, peer support, leadership programs such as Aussie Sports, and collaborative learning. Shared ventures such as outdoor education, choral work, participation in musicals and school parliaments provided for personal success and the development of self-confidence and self-esteem and group work that assisted in understanding relationships.

Awareness programs such as Landcare and Community Outreach were undertaken.

Special education programs identified and assisted students with academic needs, and gifted and talented programs were developed in some schools. The Rainbows program was taken up by schools to assist children who have experienced trauma. Health education and family life education programs were utilised.

Secondary curricula leading to improved students attitudes included health studies, driver education, work experience and work studies.

## **Postcompulsory years**

Senior secondary students had access to vocational education programs which included TAFE studies and work placement. Pastoral care and personal development programs included peer support, peer counselling and mediation. Support was provided by counselling, special education assistance and Spectrum, the secondary school version of the Rainbows program. Community outreach was encouraged through a number of activities including Landcare and St Vincent de Paul.

## **Independent schools**

A major emphasis in all schools continued to be seeking to develop the individual talents and abilities of students. As one school phrased this: "...learning about themselves and developing empathy for the strengths and weaknesses of others is seen as a reciprocal responsibility for all students".

The encouragement of the development of self-esteem, optimism and respect for others, continued to be a major objective of pastoral care programs such as Peer Support, often within a religious framework where 'responsibility for one's own actions and inactions' featured. In schools where significant portions of the school's students come from ethnic or Indigenous backgrounds, the development of students' self-esteem included developing an awareness of both their own and others' ethnic heritage and culture.

A number of schools regarded the development, or further development, of anti-bullying policies and strategies as important deterrents to anti-social behaviour. This was achieved through the encouragement of self-esteem and mutual respect for each other.

Schools recognised the importance of responding to national economic and social needs in ways which would equip students for future employment.

Schools responded in varying ways, depending upon the effect on the students and staff in each school, to the trauma created by the Port Arthur tragedy.

The involvement of parents in the education of their children was seen as being of importance.

# **Goal 3 Geographically isolated students**

## **Government schools**

### **Background**

Tasmanian schools are resourced according to indices weighted for geographic isolation. School Resource Packages reflect the extra costs incurred by schools disadvantaged by distance. Thirty-nine schools were funded under the Country Areas Component of the NEPS. Programs targeted improving student access to educational, social, cultural and sporting opportunities.

### **Distance education**

In 1996, the Tasmanian School of Distance Education provided services to 873 students. Of these, 110 K-10 and 137 postcompulsory students were geographically isolated. A variety of methods was used to deliver practical subjects including specialist kits, practical sessions in school laboratories and activity days.

### **Retention**

Retention of students who are geographically isolated continues to be of concern in Tasmania with a 1996 study into retention of rural students into years 11 and 12 showing that it was below that of the general population. In 1996 planning took place to address this through a new initiative based on vocational education. Three rural VET development officers will work within the MAATS to develop stronger links between schools, training and work. The research indicated that for many students and their parents the need to move away from home is a significant deterrent to further education. Rural MAATS programs were planned to ensure students can continue their education in their own community. One ongoing strategy to improve rural retention is the employment of home-school liaison officers in some district high schools and colleges.

**Table 92. Year 5 students' performance in literacy, Tasmania, 1996**

	<i>Listening</i>	<i>Reading</i>	<i>Speaking</i>	<i>Writing</i>		
				<i>Content</i>	<i>Language</i>	<i>'On balance'</i>
	(Max=25)	(Max=28)	(Max=10)	(Max=10)	(Max=10)	(Max=10)
<i>Distance (km)</i>	<i>Mean</i>	<i>Mean</i>	<i>Mean</i>	<i>Mean</i>	<i>Mean</i>	<i>Mean</i>
0–24.9	11.9	15.5	5.8	6.3	5.8	5.9
25–49.9	10.7	14.8	5.7	6.2	5.5	5.7
50–74.9	11.8	12.5	6.3	5.5	5.3	5.3
75–99.9	10.6	14.3	5.5	5.7	5.3	5.3
100–124.9	9.8	12.1	6.0	5.5	4.3	4.7
125–149.9	13.2	15.8	5.6	5.6	5.4	5.1
≥ 150	11.8	14.7	5.5	5.7	5.5	5.4

Source: Department of Education, Community and Cultural Development

## Student learning outcomes

Results for geographically isolated students from the year 5 Literacy Monitoring Program indicated mixed outcomes. When results were analysed according to distance from major urban centre, no clear pattern emerged. In reading, writing and listening students in the 0–24.9 km category scored higher than students in some other categories. Students in 'intermediate' categories scored, on average, less than students in both the least and most isolated categories. However, some care must be taken in interpreting these results because of the very small numbers of students in the most isolated groups. Results are summarised in Table 92.

## Catholic schools

### Background

Two primary schools received funding under the CAP and also the DSP. Programs developed dealt with numeracy, early intervention, urban and cultural awareness, craft, dance, drama and music and parental involvement in learning. The outcomes were improved skills for the children and an appreciation for learning on the part of the parents. The teacher turnover in both schools was high because of the isolated nature of the communities.

Ninety students, 46 boys and 44 girls, including three boys and three girls of Aboriginal descent, lived away from home to attend five secondary schools. A small number of these boarded in hostel accommodation provided by DECCD, seven in accommodation provided by the Catholic Education Office and the remainder in private accommodation. These students were in years 7–10 and all but one of the year 10 students went on to year 11. The

attendance of all these students was regular and the students were all within the average to above average ability range. All the schools attended by these students had stable staffs with less than ten per cent staff turnover.

## Independent schools

Generally, geographically isolated students were enrolled as boarding students in schools with boarding accommodation. Travel time was identified as a problem for some students and schools endeavoured to assist geographically isolated students to participate in social as well as academic activities.

An improved educational outcome for these students was the use of school facilities after hours. The diversity of the backgrounds of the students was perceived as being enriching to the school communities.

A conference of residential staff held in Queensland proved helpful by providing links with other schools as well as providing encouragement in their work.

## Goals 6–10

### Numeracy

#### Government schools

##### Major initiatives

The booklet, *Numerate Students – Numerate Adults*, and a set of draft KINOs for students in years 2, 5 and 8 were distributed to all schools. These documents provide the framework for the teaching and learning of numeracy in government schools, and emphasise the cross-curriculum nature of numeracy.

Model mathematics programs for years K–8 were published, based on the Tasmanian K–8 Mathematics Guidelines, national profile and KINOs. Over 85 per cent of primary and 55 per cent of high schools are now using these programs.

In 1996, DECCD surveyed a random sample of schools from primary, district high and high schools and all colleges about the mathematics background, teaching experience and teaching load of all mathematics teachers, and the organisation for teaching mathematics in schools.

### Teachers' backgrounds

Teachers of mathematics are very experienced teachers, with over 40 per cent of college teachers having taught for more than 20 years. There was evidence, however, that very experienced high school teachers from other learning areas were teaching one class of mathematics, and that these classes were usually years 7 and 8 or lower ability groups in years 9–12.

The gender balance of mathematics teachers is shown in Table 93.

The gender balance in the primary sector reflects that in primary teaching generally, as expected. In high schools (years 7–10) there is a marked imbalance in favour of male teachers.

In high schools, particularly, few teachers are teaching only mathematics. The most common subject combination is mathematics and science, but other learning areas were also frequently mentioned.

### School organisation for mathematics teaching

Varying amounts of time are spent on mathematics in the different school sectors. Primary students spend, on average, 53 minutes a day on dedicated mathematics time. In high schools, students spend approximately 35 minutes a day on mathematics, although in years 11 and 12 this rises to approximately five hours per week. In high schools and colleges, because of timetable constraints, mathematics is not studied on a daily basis.

Streaming is not common in Tasmanian government schools. Most students in years K–8 learn mathematics in a heterogeneous group. In years 9 and 10 students are generally grouped in flexible ability groupings and follow one of four 'neighbouring' courses. Mathematics is optional in years 11/12 and approximately one-third of all students study mathematics.

**Table 93. Gender balance among teachers of mathematics, Tasmania, 1996**

<i>School sector</i>	<i>% M</i>	<i>% F</i>
Primary	18	82
High	69	31
College	49	51

*Source:* Department of Education, Community and Cultural Development

## Catholic schools

### Major initiatives

Emphasis in 1996 was on completion of the audit and development of the mathematics curriculum begun in 1995. The national statement and profile were used as central reference documents and particular mathematics programs were tailored to the needs of the school. Work was also done on evaluation and reporting. Schools have recognised under-resourced areas for future development.

### Teachers' backgrounds

Primary teachers are, in the main, generalists, and all schools participated in professional development in mathematics. There was some emphasis given to the middle school to assist in understanding the continuum years 5–8, to define objectives for these years and to examine the teaching practices and resources available for this area.

Secondary school mathematics teachers have education or science degrees with significant background in mathematics.

### School organisation for mathematics teaching

All primary schools allocate 45–60 minutes daily for dedicated mathematics time. As well, the skills and abilities are also addressed through integration in other learning areas such as science, technology and SOSE.

In the secondary schools mathematics is a compulsory subject in years 7–10. About 14 per cent of teaching time was allocated to mathematics, with a further time allocation for extended mathematics as an option in years 9 and 10. For those students who opted for mathematics subjects in years 11–12, about 18 per cent of their time was devoted to this subject.

A number of the schools used the ACER Progressive Achievement Tests in mathematics to allow identification of needs leading to some streaming of students in order to address specific difficulties.

Participation in mathematics competitions helped to maintain interest and many schools utilised numeracy tests such as those produced by ACER and the University of NSW to monitor progress.

## **Independent schools**

Issues in 1996 addressed by schools included:

- participation and achievement of girls and boys;
- recruitment of skilled teachers and the development of approaches to teaching and learning;
- the amount of time allocated to numeracy in the curriculum;
- the use of State and national competitions as a challenge to the more able students; and
- the use of extra help to students with numeracy difficulties.

More than 50 per cent of year 11 and 12 students were enrolled in mathematics. One surveyed school had 93 per cent.

The results of diagnostic tests were used to provide specific extension and remedial programs.

### **Time allocation**

Schools indicated that the amount of curriculum time devoted to numeracy was approximately five hours per week in the primary years and three hours per week in the secondary years. Parents were often involved in the numeracy education of their children. Schools generally used the national statements and profiles to frame their curriculum offerings in numeracy.

Staff development included workshops through the Tasmania Educational Consortium, workshops on the national statements and profiles and the importance of problem solving.

## **Science**

### **Government schools**

Science teaching and learning was a focus for school review in 1996. District Superintendents visited 104 schools (44.6 per cent) across all school sectors. In each of these schools they addressed questions relating to provision and planning for science, uptake of the national statement and profile, professional development and future plans for science teaching. Those schools not involved in the formal review process completed a questionnaire. The information provided in this section is largely drawn from this process.

The science curriculum in years K–10 is general, addressing all strands of the national profile. In years 11/12, the curriculum becomes more specialised with more emphasis on the traditional science subjects. Primary schools indicated that science was often taught as part of an integrated unit of work, often in conjunction with technology or health.

### **Significant developments**

Most schools have developed detailed science programs based on the national statement and profile, and including details of resource allocation, outcome statements and evaluation statements. Professional development of staff in the reviewed schools was widespread and has led to changes in the teaching of science.

Over 90 per cent of schools are addressing the national profile in science. This was mainly used to map the science curriculum to provide continuity and coherence throughout the school. As a result, schools have identified areas of need and made plans to address these.

### **Resourcing**

Many primary schools have moved to centralise their science resources to improve efficient and effective use. The use of science topic ‘boxes’ is a growing trend in primary schools.

In some high schools, lack of specialist equipment and the need to upgrade existing equipment was a limiting factor. Approximately one-third of the high schools reviewed reported the need to upgrade laboratory facilities to accommodate more flexible teaching approaches.

Staffing, in particular maintaining stability of staff, was also identified as an issue for some schools, especially rural schools. A limited survey of science teachers indicated that district high schools had less experienced science teaching staff and anecdotal evidence suggested that these staff transferred to other schools after relatively short periods of time. The ratio of male to female science teachers was approximately 2:1 in high schools but 4:1 in colleges.

### **Professional development**

Schools reported widespread professional development in science. This was aided by NPDP funds which were used to support a Key Teachers of Science network in each of Tasmania’s seven education districts. The district networks published material relating to pedagogy, such as the use of cooperative learning strategies in science, and specific areas of interest, such as teaching astronomy in years K–3. In addition, the Principal Curriculum Officer (Science) conducted in-school professional development programs

**Table 94. Use of national science statement and profile, government schools, Tasmania, 1996**

<i>Nature of use</i>	<i>% of schools</i>
Program development	49
Planning	32
Basis for reporting	6
Auditing courses	5

*Source:* Department of Education, Community and Cultural Development

and 30 teachers enrolled in a distance postgraduate study program at Curtin University of Technology (WA).

### **Uptake of the national statement and profile**

Approximately ten per cent of schools reported that they have not yet addressed these documents. The nature of the use of the national documents is summarised in Table 94.

TCE science syllabuses for years 9 and 10 were revised in 1996, bringing them into line with the national statement and profile.

### **Student learning outcomes**

The majority of schools have not included an emphasis on student learning outcomes in their planning. Related to this is the need to develop improved strategies for reporting to parents. Superintendents made recommendations in these areas that will be part of the follow-up process.

### **Accessibility of science curricula to all students**

Schools used two main strategies to ensure that science is accessible to all students. The first was the introduction of special programs to cater for the needs of both gifted students and those with special learning needs. The second emphasis was on changes to pedagogy and organisation of the learning environment. Some primary schools have created space specifically for science teaching, and employed parents, peer tutors or support teachers to meet specific learning needs. Most schools have changed the approach to teaching science by emphasising cooperative learning strategies based on practical open-ended challenges and investigations.

## **Catholic schools**

### **Significant developments**

In 1996, the sequential science program for primary schools, introduced in 1995, was consolidated in terms of resourcing, supplementation and contextualising within the

national statement and profile. The program included a number of the key competencies and teachers reported good responses from the students. Teachers were trained in the course delivery and, due to its structured nature, even those who had little background in science felt confident in terms of delivery. School delivery was supplemented by use of the CSIRO Education Centre.

Primary schools devote from 1 – 1.5 hours per week for science. Future development includes work on assessment and reporting.

Science is a compulsory subject in secondary schools in years 7–10. Additional time is devoted to it by some students in years 9 and 10 in optional extension courses. Science offerings in the postcompulsory years include physics, chemistry, biology, geology and a series of life sciences, physical science and applied sciences. All schools follow the TCE syllabuses in years 9–12. The key competencies are embedded in these syllabuses.

### **Professional development**

All secondary schools are involved in the moderation processes organised and overseen by the Tasmanian Secondary Assessment Board (TSSAB) for the maintenance of standards within and between schools. Schools encourage staff participation in professional associations and participation in relevant professional development.

## **Independent schools**

Issues addressed in 1996 included:

- provision of more open research projects;
- increasing time allocation for science, particularly at junior secondary level;
- integration of science topics into the primary curriculum; and
- use of community resources.

Science continued to be taught at primary level by the classroom teacher and by specialists at secondary level.

Schools were actively involved in national and State Science Competitions such as the Tasmania Science Search, Biology Olympiad, the Science Talent Search, Shell/ESSO/BP Science Awards, Project Greenleaf and the Earthworm Award.

A number of schools strengthened links with parents and community through open days, speakers, community-sponsored lectures and activities, links with universities and museums and the Double Helix Club.