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CHAPTER 17

EDUCATION, CULTURAL ACTIVITIES AND RESEARCH

For the most recent statistics available on subjects dealt with in this chapter reference should be made to the series of mimeographed bulletins *Social Statistics* issued by this Bureau. The *Quarterly Summary of Australian Statistics* contains summarised information on these subjects, and financial aspects are dealt with in the annual bulletins *Commonwealth Finance and State, Territory and Local Government Authorities' Finance and Government Securities*. The Annual Reports of the respective State Education Departments provide detailed statistical and other information concerning particular States.

EDUCATION

An account of the development of the Australian school system up to 1929 may be found in Year Books Nos. 1, 2, 17 and 22. In Year Book No. 40 a review of changes which occurred up to 1951 and of the practices then current was presented from material furnished by the Commonwealth Office of Education, which contributed much of the textual matter in the following sections.

Education in Australian schools

Administration and organisation

In Australia the provision of schools is mainly the responsibility of State Governments. During the nineteenth century all six Australian colonies had established systems of compulsory education, beginning with the *Education Act 1872* in Victoria, and followed by similar Acts in Queensland (1875), South Australia (1875), New South Wales (1880), Tasmania (1893), and Western Australia (1893). These Acts, with subsequent amendments, constitute the legal basis of compulsory education in the Australian States to-day.

School attendance is compulsory throughout Australia between the ages of six and fifteen at least. The minimum leaving age is fifteen years in New South Wales, Victoria, Queensland, and South Australia, and sixteen years in Tasmania, while in Western Australia attendance is compulsory until the end of the year in which the child turns fifteen years. The Education Acts require that all children between the prescribed ages must attend either a government school or some other recognised educational institution. Children may be exempted from the requirement of compulsory attendance if they live too far from a school or suffer a physical disability. These children usually receive correspondence tuition.

The school year in Australia begins at the end of January or early in February; it ends in mid-December. The long vacation is taken over the summer months (December to February) and two short vacations divide the school year into three terms.

At government primary schools it is usual for both boys and girls to attend the same school; at the secondary level practices vary, but the trend is towards co-educational schools. Non-government schools cater mainly for boys and girls separately.

Government school systems

Government schools, except in the Commonwealth Territories, are a responsibility of the six State Governments. Although the educational systems are not identical, they have many similar features. Responsibility for framing educational policy and having it put into effect rests with a Minister for Education, who is a member of the State Cabinet. The administrative authority in each State is an Education Department headed by a Director-General or Director of Education. Separate divisions of the Education Department in each State administer primary, secondary and technical education (in New South Wales there is a separate Department of Technical Education). Other divisions look after such matters as the recruitment and training of teachers, pupil guidance, research, and the education of atypical children. In some States administration has been decentralised to a degree by the appointment of 'Area' or 'Regional' directors, who are responsible for policy in the area which they control.

Tuition at government primary and secondary schools is free in all States. Parents are usually expected to bear the cost of text-books, uniforms and charges for such things as the use of sports materials. However, income tax concessions exist in respect of these expenditures for both government and non-government systems, and certain text-book costs are subsidised in the case of pupils attending government and non-government schools in some States.

Non-government schools systems

More than 80 per cent of the children at non-government primary and secondary schools attend Roman Catholic schools, which form a highly developed but not centralised system. At the primary level these children normally attend mixed parish schools, but at the secondary level there are boys schools, approximately half taking boarders, and girls schools. Some of the small convent schools in country districts enrol young boys as well as girls. The organisation of Roman Catholic schools is primarily on a diocesan basis under the general direction of the bishop, although many of the religious orders which conduct schools are Australia-wide and have their own internal organisation.

The majority of other non-government schools, sometimes known as 'private' or 'independent' schools, are conducted by, or are under the auspices of, various religious denominations, particularly the Church of England, Presbyterian and Methodist Churches. Others are conducted by the Baptist, Lutheran, Congregational, and Seventh-day Adventist Churches and by smaller religious groups. There are Jewish schools in several capital cities. A few non-government schools, including some of the foremost, are undenominational and conducted under the auspices of corporate bodies.

The methods adopted by the educational authorities to ensure an acceptable standard of education at non-government schools vary from State to State. In New South Wales, Victoria, Western Australia, and Tasmania these schools are regularly inspected. In Victoria and Tasmania, schools and teachers must be registered. In Queensland eight grammar schools which exist by statutory authority and are subsidised by the State are subject to annual inspection. Other non-government schools in Queensland and also those in South Australia are not subject to inspection.

The principals of a number of the larger non-government schools have formed organisations with both State and Australia-wide coverage, namely the Headmasters' Conference of the Independent Schools of Australia and the Association of Headmistresses of Independent Schools of Australia.

Schools and courses

Primary education in government schools. Though school attendance is not compulsory until the age of six, most Australian children begin school when they are five, attending infants schools or infants classes attached to a primary school. In some States the first year in the infants department is known as 'kindergarten'. The emphasis in infants classes is on the development of skills in language and numbers. There is a gradual shift towards more formal activities in the second and third years. Creative expression through drawing, dancing, handiwork, dramatisation, and painting and similar activities is encouraged. At the end of their infants school training most children are able to read with some fluency, carry out simple arithmetical operations founded on the basic number facts, and write in pencil.

At about the age of eight most children pass into the primary school proper, where they usually spend four or five years. Primary schools are normally provided when and where there is sufficient population to justify them. Irrespective of the size or the location of the school, standards of tuition do not vary appreciably, because teachers within a State follow similar courses of training and transfer freely between metropolitan and country areas. The Education Departments prescribe syllabuses of instruction, which are drawn up with the assistance of expert committees. The primary syllabuses have an emphasis on basic subjects like reading, writing, arithmetic, social studies, and oral language, but the teacher has some freedom to modify courses to suit local circumstances and the varying abilities of his students.

Children attend primary schools in their own districts, usually within walking distance of their homes, on five days each week. The school day is broken up into three or four sessions by a lunch break and by a morning and sometimes an afternoon recess. The total period of instruction is four and a half to five hours daily with individual subject lessons lasting twenty to thirty minutes. Periods are set aside for physical education and sport. One teacher generally has charge of a class and teaches it all the subjects set out in the curriculum for the particular grade.

Pupils do not, as a rule, sit for a public examination during or at the end of their primary course, and progression from primary to secondary school is automatic. Allocation to particular schools or particular courses is based on the recommendations of the headmaster, general ability tests, tests of achievement in the basic subjects, and parents' wishes. In South Australia pupils may proceed to secondary school on receiving the Progress Certificate, which is awarded on satisfactory completion of the seventh grade, the highest grade at primary level.

Secondary education in government schools. The age of transfer from a government primary to secondary school is usually between twelve and thirteen. Most secondary schools are co-educational, although separate schools for boys and girls are not uncommon in capital cities. In the cities and larger country centres secondary and primary courses are provided in separate schools, but in less populous areas secondary classes sometimes share buildings with primary classes.

The secondary student takes up new studies, such as foreign languages and technical or commercial subjects, and moves on to more specialised studies in natural and social sciences and mathematics. The study of basic subjects begun in primary school is continued. The actual subjects studied depend on the ability of the pupil and the type of school. A school day is divided into 'periods' and the children are taught by a number of teachers, each specialising in a particular subject or group of subjects.

In the past, to meet the varying abilities and needs of students, various kinds of secondary schools were established in which different types of education were provided, although in country areas secondary schools tended of necessity to be comprehensive and offered a full range of secondary courses. But following the re-examination by expert committees in all States of the problems associated with the provision of appropriate secondary education for all, significant changes in the structure and curricula of secondary schools are taking place. In New South Wales, for example, following a committee's recommendation that the secondary curriculum should offer a core of common basic education to all students, secondary schools have become comprehensive. Pupils of different aptitudes and interests in a given locality now attend the same secondary school, undertake this core of common basic studies, and in addition specialise according to their proven abilities and interests.

The most common type of secondary school is the comprehensive or multi-purpose high school, which offers a wide range of subjects. To cater for this diversity of subjects, most high schools now have modern facilities for the teaching of domestic science, commercial subjects, woodwork, and other technical subjects. In some States there are still, however, separate high schools specialising in technical, commercial or home science subjects. In some States there are also a few separate agricultural high schools, some of them residential. The curriculum consists of general educational subjects and practical farm training. There are also 'area' and 'rural' schools offering up to three years of secondary study, and in some States courses in agriculture are also given at high schools.

Primary and secondary education in non-government schools. Non-government schools follow curricula similar to those laid down by Education Departments and prepare their students for examinations conducted by public examining authorities. Most non-government schools are comprehensive type schools, providing a range of subjects and courses at various levels. Although there are similarities between non-government and government schools in the courses they provide, more emphasis is given to the religious training of pupils in denominational schools. A few schools, mostly Roman Catholic secondary schools, specialise in agricultural and technical courses. Non-government schools offer some facilities additional to those normally found in government schools, such as personal tuition in music, ballet, etc. A few are organised on 'experimental' lines.

Examinations

During the course of secondary education State-wide examinations are taken at two levels. The earlier examination qualifies pupils for entry to trade courses at technical colleges and agricultural colleges, to junior commercial positions in, for instance, insurance and banking, to nursing and secretarial courses, to lower grades of the public service, and to industry. The examination at the end of the secondary school course qualifies students for entry to teachers' colleges, the higher grades of the public service, and commercial occupations; this examination is also the qualification for entry to the university, certain subjects and combinations of subjects being set down as the matriculation requirements by the respective universities.

In most States the higher examination is controlled by a board consisting of representatives of the Department of Education, the universities, non-government schools, and sometimes of other bodies such as teachers' organisations. A brief description of the examinations in each State follows.

New South Wales. For pupils who commenced their secondary education in 1962 or later, the full secondary course is of six years duration, with a School Certificate Examination at the end of the fourth year, age about sixteen, and a Higher School Certificate Examination (Matriculation) after a further two years. The last Intermediate and Leaving Certificate Examinations under the old system were conducted in 1966. Now pupils who leave school before gaining their School Certificate receive a signed statement of attainment from their school principal.

Victoria. The Intermediate Examination taken at the end of the fourth secondary year, at about the age of sixteen, will be held for the last time in 1967. The School Leaving Examination is taken at the end of fifth year, and the Matriculation Examination at the end of sixth year. Pupils at approved non-government schools and certain government schools may be accredited for the Intermediate and Leaving by passing examinations set by their own schools.

Queensland. The Junior Public Examination is taken at the end of third year, at about the age of fifteen and a half. The Senior Public Examination conducted by the University of Queensland is taken at the end of fifth year, at about the age of seventeen and a half, and matriculation is obtained on results in this examination.

South Australia. The Intermediate Examination taken at the end of the third year, at about the age of fifteen and a half, will be held for the last time in 1968. The Leaving Examination is taken at the end of the fourth year and a Matriculation Examination is to be held at the end of the fifth year.

Western Australia. The Junior Certificate Examination is taken at the end of third year, at about the age of fifteen and a half. Students who pursue a less academic course may take the High School Certificate Examination at this level. The Leaving Certificate Examination is taken at the end of fifth year, at an average age of seventeen and a half, and matriculation is gained on results in this examination.

Tasmania. The Schools Board Certificate Examination is taken at the end of the fourth year, at about the age of sixteen and a half, and the Matriculation Examination conducted by the University of Tasmania at the end of the fifth or sixth year.

Numbers of schools, teachers and pupils

The statistics which follow relate generally to schools providing education according to the primary or secondary school curricula of the various State Education Departments, or both, whether provided in government or non-government schools. Junior technical schools, correspondence schools, and schools in institutional homes, hospitals and similar establishments are included. Institutions providing only pre-school education, senior technical and agricultural colleges, evening schools, continuation classes, and institutions such as business colleges and coaching establishments are, as a rule, excluded.

School censuses are conducted annually at or about the beginning of August throughout all States and Territories of Australia. The numbers of pupils in the tables which follow refer to enrolments at the school census date. The numbers of schools and teachers refer to the position at dates which vary from State to State and in some instances from year to year. While it has not been possible to present all figures on a uniform basis between States, continuity of the figures for any one State over the period of years shown has been maintained as far as possible. Particulars relating to senior technical colleges are given on pages 599-602.

Schools, teachers and pupils

The numbers of government and non-government schools, teachers and pupils for 1966 and earlier years are shown in the following tables.

NUMBERS OF SCHOOLS AND PUPILS, BY CATEGORY OF SCHOOL STATES AND TERRITORIES, 1966

Category of school	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
SCHOOLS									
Government	2,653	2,242	1,321	673	555	294	56	32	7,826
Non-government—									
Denominational—									
Church of England	33	33	20	12	9	4	..	3	114
Hebrew	3	7	..	..	1	..	..	..	11
Lutheran	3	8	3	13	..	..	1	..	28
Methodist	6	4	(a) 5	4	3	1	2	..	25
Presbyterian	13	14	6	2	2	2	..	..	39
Roman Catholic	662	483	296	130	174	50	10	15	1,820
Seventh-day Adventist	17	8	6	4	6	3	..	..	44
Other . . . . .	..	4	1	2	2	1	3	..	13
Undenominational	57	18	9	5	3	3	5	..	100
Total, non-government	794	579	346	172	200	64	21	18	2,194
Grand total	3,447	2,821	1,667	845	755	358	77	50	10,020

(a) Presbyterian and Methodist Schools Association.

NUMBERS OF SCHOOLS AND PUPILS, BY CATEGORY OF SCHOOL STATES AND TERRITORIES, 1966—continued

Category of school	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
PUPILS (CENSUS ENROLMENT)									
Government	672,508	523,786	270,236	210,435	146,888	72,461	8,307	16,642	1,921,263
Non-government—									
Denominational—									
Church of England	12,045	15,522	5,565	4,334	3,693	1,843	..	1,208	44,210
Hebrew	333	2,317	..	..	135	..	..	..	2,785
Lutheran	234	642	893	1,495	..	..	134	..	3,398
Methodist	2,868	4,146	(a)2,149	2,060	1,590	333	408	..	13,554
Presbyterian	5,301	8,296	1,055	1,495	1,220	587	..	..	17,954
Roman Catholic	186,242	145,237	71,514	26,242	31,030	10,592	1,514	6,051	478,422
Seventh-day Adventist	1,122	612	325	129	471	128	..	..	2,787
Other	..	2,342	147	429	167	994	234	..	4,313
Undenominational	6,329	3,741	3,873	1,252	99	266	84	..	15,644
Total, non-government	214,474	182,855	85,521	37,436	38,405	14,743	2,374	7,259	583,067
Grand total	886,982	706,641	355,757	247,871	185,293	87,204	10,681	23,901	2,504,330

(a) Presbyterian and Methodist Schools Association.

NUMBERS OF TEACHERS: STATES AND TERRITORIES, 1966(a)

State or Territory	Government schools			Non-government schools			All schools		
	Full-time	Part-time		Full-time	Part-time		Full-time	Part-time	
		No.	Eq. f.t.u. (b)		No.	Eq. f.t.u. (b)		No.	Eq. f.t.u. (b)
New South Wales	27,898	1,056	520	6,717	(e)1,821	471	34,615	2,877	991
Victoria	20,788	c 2,275	c 1,357	5,844	1,237	313	26,632	3,512	1,670
Queensland	9,637	677	54	2,649	568	131	12,286	1,245	185
South Australia	8,189	481	174	1,306	371	116	9,495	852	290
Western Australia	5,213	135	39	1,274	221	67	6,487	356	106
Tasmania	3,183	279	69	523	164	35	3,706	443	104
Northern Territory	340	13	2	(d) 75	..	..	415	13	2
Australian Capital Territory	695	16	9	261	(e) 41	13	956	57	22
Total	75,943	4,932	2,224	18,649	4,423	1,146	94,592	9,355	3,370

(a) Excludes teachers-in-training generally. (b) The methods used for calculating equivalent full-time units of part-time teaching vary from State to State, between government and non-government schools, and between primary and secondary schools within States. For most schools the information is based on either the total hours worked or total number of class periods taken in a week by part-time teachers, in relation to the normal hours worked or periods taken by full-time teachers. (c) A large proportion of male part-time teachers in Victoria are engaged in junior technical schools. A teacher is included as part-time if his teaching time at a junior technical school is less than 32 hours a week. (d) Excludes unqualified teachers and teaching assistants at mission schools. (e) Visiting teachers who attend more than one school are counted as part-time in each.

NUMBERS OF SCHOOLS AND PUPILS: AUSTRALIA, 1962 TO 1966

	1962	1963	1964	1965	1966
Schools—					
Government	7,941	7,910	7,872	7,844	7,826
Non-government	2,178	2,193	2,205	2,221	2,194
Total schools	10,119	10,103	10,077	10,065	10,020
Pupils(a)—					
Government	1,713,265	1,756,538	1,801,364	1,857,120	1,921,263
Non-government	539,887	552,759	565,415	580,532	583,067
Total pupils	2,253,152	2,309,297	2,366,779	2,437,652	2,504,330

(a) Census enrolment.

**NUMBERS OF TEACHERS, BY CATEGORY OF SCHOOL
STATES AND TERRITORIES, 1966(a)**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Government schools—									
Full-time	27,898	20,788	9,637	8,189	5,213	3,183	340	695	75,943
Part-time—									
Number	1,056	(b)2,275	677	481	135	279	13	16	4,932
Eq. f.t.u.(c)	520	(b)1,357	54	174	39	69	2	9	2,224
Non-government schools—									
Baptist—									
Full-time . . . . .	..	115	..	(d) 24	..	..	..	..	139
Part-time—									
Number . . . . .	..	36	..	(d) 2	..	..	..	..	38
Eq. f.t.u.(c) . . . . .	..	13	..	..	..	..	..	..	13
Church of England—									
Full-time	697	887	301	232	200	100	..	79	2,496
Part-time—									
Number	223	176	49	62	71	36	..	11	628
Eq. f.t.u.(c)	90	58	20	24	24	8	..	4	228
Hebrew—									
Full-time	21	145	..	..	7	..	..	..	173
Part-time—									
Number	6	20	..	..	1	..	..	..	27
Eq. f.t.u.(c)	2	8	..	..	..	..	..	..	10
Lutheran—									
Full-time	13	30	41	65	..	..	5	..	154
Part-time—									
Number	6	3	2	25	..	..	..	..	36
Eq. f.t.u.(c)	2	1	1	6	..	..	..	..	10
Methodist—									
Full-time	147	232	(e) 100	99	88	16	16	..	698
Part-time—									
Number	46	27	(e) 25	25	30	11	..	..	164
Eq. f.t.u.(c)	25	9	(e) 7	11	12	4	..	..	68
Presbyterian—									
Full-time	304	468	73	75	70	38	..	..	1,028
Part-time—									
Number	56	109	12	20	9	16	..	..	222
Eq. f.t.u.(c)	23	38	3	10	3	5	..	..	82
Roman Catholic—									
Full-time	4,996	3,692	1,945	740	874	290	36	182	12,755
Part-time—									
Number	1,373	790	451	216	102	91	..	30	3,053
Eq. f.t.u.(c)	282	155	91	53	24	16	..	9	630
Seventh-day Adventist—									
Full-time	54	36	13	10	23	9	..	..	145
Part-time—									
Number	20	4	2	1	8	3	..	..	38
Eq. f.t.u.(c)	6	2	..	..	4	..	..	..	12
Other denominational—									
Full-time . . . . .	..	13	5	..	6	57	13	..	94
Part-time—									
Number . . . . .	..	7	..	..	..	4	..	..	11
Eq. f.t.u.(c) . . . . .	..	3	..	..	..	2	..	..	5
Undenominational—									
Full-time	485	226	171	61	6	13	5	..	967
Part-time—									
Number	91	65	27	20	..	3	..	..	206
Eq. f.t.u.(c)	41	26	9	12	..	..	..	..	88
Total, non-government schools—									
Full-time	6,717	5,844	2,649	1,306	1,274	523	(f) 75	261	18,649
Part-time—									
Number	(g)1,821	1,237	568	371	221	164	..	(g) 41	4,423
Eq. f.t.u.(c)	471	313	131	116	67	35	..	13	1,146
Grand total—									
Full-time	34,615	26,632	12,286	9,495	6,487	3,706	415	956	94,592
Part-time—									
Number	2,877	3,512	1,245	852	356	443	13	57	9,355
Eq. f.t.u.(c)	991	1,670	185	290	106	104	2	22	3,370

(a) Excludes teachers-in-training generally. (b) A large proportion of male part-time teachers in Victoria are engaged in junior technical schools. A teacher is included as part-time if his teaching time at a junior technical school is less than 32 hours a week. (c) For basis of calculating equivalent full-time units of part-time teaching see footnote (b) page 587. (d) Baptist and Congregational. (e) Schools conducted by the Presbyterian and Methodist Schools Association. (f) Excludes unqualified teachers and teaching assistants at mission schools. (g) Visiting teachers who attend more than one school are counted as part-time in each.

NUMBERS OF TEACHERS: GOVERNMENT AND NON-GOVERNMENT SCHOOLS (a)
STATES AND TERRITORIES, 1962 TO 1966

	Government schools			Non-government schools			All schools		
	Number of full-time teachers	Part-time teachers		Number of full-time teachers	Part-time teachers		Number of full-time teachers	Part-time teachers	
		Number	Eq. f.t.u. (b)		Number	Eq. f.t.u. (b)		Number	Eq. f.t.u. (b)
New South Wales—									
1962		(c)23,330		6,019 (d)	1,555	n.a.	n.a.	n.a.	n.a.
1963		(c)24,672		6,215 (d)	1,586	n.a.	n.a.	n.a.	n.a.
1964		(c)25,993		6,541 (d)	1,621	n.a.	n.a.	n.a.	n.a.
1965	26,831	878	415	6,842 (d)	1,743	443	33,673	2,621	858
1966	27,898	1,056	520	6,717 (d)	1,821	471	34,615	2,877	991
Victoria—									
1962	17,724		n.a.	5,102		n.a.	22,826		n.a.
1963	17,373 (e)	1,668	n.a.	5,038	978	n.a.	22,411	2,646	n.a.
1964	19,026 (e)	1,568	n.a.	5,326	1,004	n.a.	24,352	2,572	n.a.
1965	20,083 (e)	1,816	1,134	5,551	1,149	278	25,634	2,965	1,412
1966	20,788 (e)	2,275	1,357	5,844	1,237	313	26,632	3,512	1,670
Queensland—									
1962	8,583	805	n.a.	2,331	459	n.a.	10,914	1,264	n.a.
1963	8,810	854	n.a.	2,333	468	n.a.	11,143	1,322	n.a.
1964	9,058	819	n.a.	2,472	539	n.a.	11,530	1,358	n.a.
1965	9,316	696	56	2,543	492	107	11,859	1,188	163
1966	9,637	677	54	2,649	568	131	12,286	1,245	185
South Australia—									
1962	6,312	432	n.a.	1,130	324	n.a.	7,442	756	n.a.
1963	6,895	431	n.a.	1,165	319	n.a.	8,060	750	n.a.
1964	7,340	477	n.a.	1,231	329	n.a.	8,571	806	n.a.
1965	7,872	468	143	1,252	355	114	9,124	823	257
1966	8,189	481	174	1,306	371	116	9,495	852	290
Western Australia—									
1962	4,241	91	18	1,097	96	n.a.	5,338	187	n.a.
1963	4,471	74	17	1,148	n.a.	44	5,619	n.a.	61
1964	4,713	103	16	1,188	141	32	5,901	244	48
1965	4,934	119	39	1,247	186	46	6,181	305	85
1966	5,213	135	39	1,274	221	67	6,487	356	106
Tasmania—									
1962	2,797	111	n.a.	503	94	n.a.	3,300	205	n.a.
1963	2,919	183	n.a.	509	85	n.a.	3,428	268	n.a.
1964	3,016	141	n.a.	503	132	n.a.	3,519	273	n.a.
1965	3,131	194	55	509	r157	29	r3,640	r351	84
1966	3,183	279	69	523	164	35	3,706	443	104
Northern Territory—									
1962	182	2	n.a.	(f) 61	1	n.a.	243	3	n.a.
1963	207	4	n.a.	(f) 68	1	n.a.	275	5	n.a.
1964	r241	6	n.a.	(f) r63	..	n.a.	304	6	n.a.
1965	r281	4	1	(f) 72	..	..	r353	5	1
1966	340	13	2	(f) 75	..	..	415	13	2
Australian Capital Territory—									
1962		(c)463		160 (d)	32	n.a.	n.a.	n.a.	n.a.
1963		(c)476		183 (d)	18	n.a.	n.a.	n.a.	n.a.
1964		(c)554		215 (d)	27	n.a.	n.a.	n.a.	n.a.
1965	596	34	24	240 (d)	28	6	836	62	30
1966	695	16	9	261 (d)	41	13	956	57	22

(a) Excludes teachers-in-training generally. (b) For basis of calculating equivalent full-time units for part-time teachers, see footnote (b) on page 587. (c) Includes numbers of full-time teachers (including casual teachers) and part-time casual teachers expressed in equivalent full-time units, for government schools. (d) Visiting teachers who attend more than one school are counted as part-time in each school visited. (e) A large proportion of male part-time teachers in Victoria are engaged in junior technical schools. A teacher is included as part-time if his teaching time at a junior technical school is less than 32 hours a week. (f) Excludes unqualified teachers and teaching assistants at mission schools.

Ages of pupils

The ages of pupils at school census dates for 1966 and earlier years are shown in the following tables.

GOVERNMENT AND NON-GOVERNMENT SCHOOLS: PUPILS, BY AGE AND SEX
AUSTRALIA, 1966

(Census enrolment)

Age last birthday (years)	Government schools			Non-government schools			Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total (a)
Under 6	82,397	77,453	159,850	21,825	22,042	43,867	104,222	99,495	203,717
6	95,227	89,259	184,486	25,482	25,511	50,993	120,709	114,770	235,479
7	94,192	89,102	183,294	26,200	26,364	52,564	120,392	115,466	235,858
8	92,727	87,004	179,731	25,176	25,837	51,013	117,903	112,841	230,744
9	90,755	84,909	175,664	25,006	25,869	50,875	115,761	110,778	226,539
10	90,624	83,204	173,828	24,755	25,602	50,357	115,379	108,806	224,185
11	88,357	82,374	170,731	24,465	25,485	49,950	112,822	107,859	220,681
12	85,589	78,140	163,729	24,228	26,342	50,570	109,817	104,482	214,299
13	85,970	77,866	163,836	23,836	27,084	50,920	109,806	104,950	214,756
14	83,517	75,183	158,700	22,091	25,096	47,187	105,608	100,279	205,887
15	62,573	52,280	114,853	19,307	20,596	39,903	81,880	72,876	154,756
16	36,319	26,067	62,386	14,458	13,391	27,849	50,777	39,458	90,235
17	14,811	8,540	23,351	7,790	5,095	12,885	22,601	13,635	36,236
18 and over	4,935	1,889	6,824	3,078	1,056	4,134	8,013	2,945	10,958
Total	1,007,993	913,270	1,921,263	287,697	295,370	583,067	1,295,690	1,208,640	2,504,330

(a) Includes Aboriginal children.

SCHOOLS: PUPILS, BY AGE, STATES AND TERRITORIES, 1966

(Census enrolment)

Age last birthday (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.(a)
Under 6	85,138	61,149	19,989	19,152	7,744	6,866	1,143	2,536	203,717
6	82,907	64,476	34,894	23,465	18,194	8,116	1,105	2,322	235,479
7	83,319	65,046	34,671	22,870	18,103	8,342	1,186	2,321	235,858
8	82,007	63,221	33,636	22,320	17,991	8,199	1,116	2,254	230,744
9	79,585	62,386	33,460	22,220	17,927	7,839	1,050	2,072	226,539
10	77,761	61,644	33,316	21,969	18,269	8,170	1,014	2,042	224,185
11	76,983	60,997	32,999	21,463	17,784	7,582	973	1,900	220,681
12	76,563	58,267	30,547	21,488	17,197	7,445	893	1,899	214,299
13	76,485	59,645	29,513	21,654	17,289	7,495	775	1,900	214,756
14	73,309	56,514	29,611	20,831	15,887	7,339	662	1,734	205,887
15	52,933	45,374	22,036	16,401	10,549	5,595	425	1,443	154,756
16	29,179	29,620	12,357	9,936	5,172	2,739	257	975	90,235
17	8,887	13,733	6,272	3,295	2,495	1,107	66	381	36,236
18 and over	1,926	4,569	2,456	807	692	370	16	122	10,958
Total	886,982	706,641	355,757	247,871	185,293	87,204	10,681	23,901	2,504,330

(a) Includes Aboriginal children.

SCHOOLS: PUPILS, BY AGE AND SEX, AUSTRALIA, 1962 TO 1966

(Census enrolment)

Age last birthday (years)	1962		1963		1964		1965 (b)		1966 (b)	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Under 6	91,801	88,208	95,454	91,544	97,651	93,404	100,399	95,811	104,222	99,495
6	110,551	104,032	112,486	107,528	114,888	109,812	118,565	113,600	120,709	114,770
7	108,735	104,722	112,251	105,595	113,685	108,423	116,512	111,748	120,392	115,466
8	106,567	102,267	109,026	104,940	111,882	106,358	114,660	109,538	117,903	112,841
9	107,531	103,527	106,932	102,944	109,601	105,826	113,810	107,719	115,761	110,778
10	106,418	101,299	109,020	104,124	108,446	103,905	111,359	107,105	115,379	108,806
11	105,413	100,722	107,441	102,169	109,593	105,228	110,026	104,874	112,822	107,859
12	104,823	99,480	105,461	101,110	107,342	102,220	110,091	105,816	109,817	104,482
13	100,160	95,567	104,744	99,760	105,434	100,668	107,850	102,728	109,806	104,950
14	93,321	86,377	93,578	87,336	99,617	94,053	101,907	97,432	105,608	100,279
15	74,412	61,759	71,323	59,772	71,619	61,317	77,735	68,958	81,880	72,876
16	35,384	24,920	44,182	32,741	43,843	33,045	46,095	35,604	50,777	39,458
17	15,147	8,670	17,709	10,117	22,826	13,642	22,624	13,936	22,601	13,635
18 and over	4,947	1,476	5,428	1,693	7,072	2,290	8,249	2,901	8,013	2,945
Not stated	2,436	2,480	1,412	1,477	1,549	1,540	..	..	..	..
Total	1,167,646	1,085,506	1,196,447	1,112,850	1,225,048	1,141,731	1,259,882	1,177,770	1,295,690	1,208,640

(a) Comprises Aboriginal children at special schools whose ages were not collected.

(b) Aboriginal children included in specified age groups.

SCHOOLS: AGES OF PUPILS, AUSTRALIA, 1966

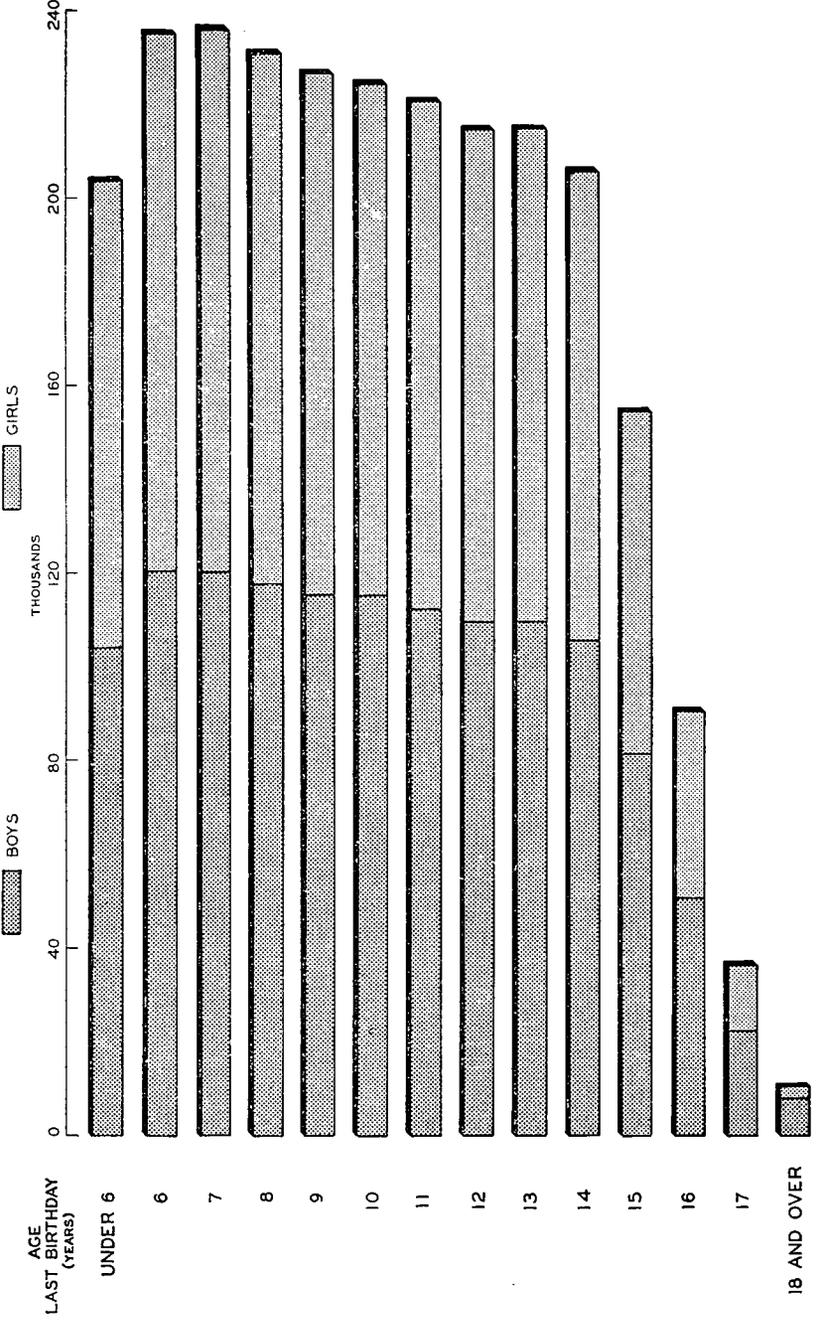


PLATE 36

Grades of pupils

The numbers of pupils enrolled in grades in each State and Territory are shown in the following table. The grading of pupils differs for the various school systems in Australia because of the differences in curricula set by Education Departments. In addition, the methods of allocating classes to grades vary from State to State, and there are also differences in the administrative methods of aggregating grades of a more or less similar nature. The figures presented in these tables represent essentially the system of grading adopted in each different State and are therefore not comparable between States.

GOVERNMENT AND NON-GOVERNMENT SCHOOLS: PUPILS, BY GRADE, ETC. AND SEX, STATES AND TERRITORIES, 1966

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
NEW SOUTH WALES									
Infants—									
Kindergarten	35,449	32,694	68,143	10,700	10,648	21,348	46,149	43,342	89,491
1	39,116	35,748	74,864	10,460	10,200	20,660	49,576	45,948	95,524
2	34,615	32,713	67,328	10,221	9,987	20,208	44,836	42,700	87,536
Primary—									
3	33,537	31,437	64,974	9,956	10,081	20,037	43,493	41,518	85,011
4	33,039	30,527	63,566	9,724	9,713	19,437	42,763	40,240	83,003
5	31,690	29,882	61,572	9,434	9,708	19,142	41,124	39,590	80,714
6	30,984	29,444	60,428	9,504	9,793	19,297	40,488	39,237	79,725
Special primary grades	4,072	2,736	6,808	1,068	949	2,017	5,140	3,685	8,825
Secondary—									
1st (or 7)	31,452	28,966	60,418	8,933	9,830	18,763	40,385	38,796	79,181
2nd (or 8)	29,707	27,449	57,156	8,573	9,504	18,077	38,280	36,953	75,233
3rd (or 9)	23,010	21,413	44,423	7,641	8,260	15,901	30,651	29,673	60,324
4th	14,853	12,175	27,028	6,264	6,399	12,663	21,117	18,574	39,691
5th	7,535	4,940	12,475	3,537	2,525	6,062	11,072	7,465	18,537
5th year repeat	1,606	704	2,310	769	93	862	2,375	797	3,172
Special secondary grades	742	273	1,015	..	..	..	742	273	1,015
Total	351,407	321,101	672,508	106,784	107,690	214,474	458,191	428,791	886,982

VICTORIA

1(a)	52,913	48,485	101,398	15,331	15,199	30,530	68,244	63,684	131,928
2	25,433	23,283	48,716	8,731	8,463	17,194	34,164	31,746	65,910
3	24,322	22,699	47,021	8,312	8,214	16,526	32,634	30,913	63,547
4	24,123	22,309	46,432	8,054	8,216	16,270	32,177	30,525	62,702
5	23,891	21,964	45,855	8,099	8,288	16,387	31,990	30,252	62,242
6	23,186	21,432	44,618	7,980	8,187	16,167	31,166	29,619	60,785
Ungraded(b)	1,398	850	2,248	102	154	256	1,500	1,004	2,504
7 or I	24,530	21,542	46,072	6,819	8,379	15,198	31,349	29,921	61,270
8 or II	24,317	21,352	45,669	6,513	7,972	14,485	30,830	29,324	60,154
III	22,107	18,580	40,687	5,985	7,402	13,387	28,092	25,982	54,074
IV	16,818	13,913	30,731	5,368	6,158	11,546	22,206	20,071	42,277
V	10,153	7,332	17,485	4,545	4,541	9,086	14,698	11,873	26,571
VI	3,962	2,892	6,854	3,337	2,486	5,823	7,299	5,378	12,677
Total	277,153	246,633	523,786	89,196	93,659	182,855	366,349	340,292	706,641

QUEENSLAND

Primary—									
Preparatory				338	298	636	338	298	636
I	16,746	15,124	31,870	4,754	4,497	9,251	21,500	19,621	41,121
II	15,262	13,971	29,233	4,225	4,204	8,429	19,487	18,175	37,662
III	14,591	13,493	28,084	3,874	3,798	7,672	18,465	17,291	35,756
IV	14,259	13,430	27,689	3,694	3,730	7,424	17,953	17,160	35,113
V	14,214	13,013	27,227	3,613	3,819	7,432	17,827	16,832	34,659
VI	13,581	12,910	26,491	3,650	3,811	7,461	17,231	16,721	33,952
VII	13,268	12,547	25,815	3,605	3,835	7,440	16,873	16,382	33,255
Ungraded	1,154	570	1,724	41	34	75	1,195	604	1,799
Secondary—									
1st	12,445	11,380	23,825	3,960	4,236	8,196	16,405	15,616	32,021
2nd	11,462	10,706	22,168	3,907	4,006	7,913	15,369	14,712	30,081
3rd	9,059	8,493	17,552	3,370	3,289	6,659	12,429	11,782	24,211
4th	2,885	2,032	4,917	2,121	1,661	3,782	5,006	3,693	8,699
5th	2,118	1,523	3,641	1,899	1,252	3,151	4,017	2,775	6,792
Total	141,044	129,192	270,236	43,051	42,470	85,521	184,095	171,662	355,757

(a) In Victoria children who are expected to reach five years of age by 1 July are admitted at the beginning of the school year. The younger children may not reach grade 2 until they have been at school for two years.

(b) Pupils at certain special schools classified as primary.

GOVERNMENT AND NON-GOVERNMENT SCHOOLS: PUPILS, BY GRADE, ETC.
AND SEX, STATES, ETC., 1966—continued

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
SOUTH AUSTRALIA									
Pre-primary				99	150	249	99	150	249
Kindergarten	2,379	2,161	4,540				2,379	2,161	4,540
I	12,814	11,628	24,442	2,080	2,077	4,157	14,894	13,705	28,599
II	10,837	10,217	21,054	1,594	1,762	3,356	12,431	11,979	24,410
III	10,647	9,744	20,391	1,591	1,702	3,293	12,238	11,446	23,684
IV	10,478	9,877	20,355	1,576	1,670	3,246	12,054	11,547	23,601
V	10,321	9,767	20,088	1,614	1,771	3,385	11,935	11,538	23,473
VI	10,211	9,447	19,658	1,642	1,696	3,338	11,853	11,143	22,996
VII	9,701	9,101	18,802	1,649	1,738	3,387	11,350	10,839	22,189
Ungraded(a)	1,323	842	2,165	10	16	26	1,333	858	2,191
VIII or 1st	10,124	9,083	19,207	1,607	1,752	3,359	11,731	10,835	22,566
IX or 2nd	8,924	8,277	17,201	1,497	1,734	3,231	10,421	10,011	20,432
X or 3rd	7,545	6,608	14,153	1,499	1,698	3,197	9,044	8,306	17,350
XI or 4th	3,695	2,771	6,466	1,179	1,021	2,200	4,874	3,792	8,666
5th	1,233	648	1,881	647	365	1,012	1,880	1,013	2,893
Ungraded(b)	12	20	32				12	20	32
Total	110,244	100,191	210,435	18,284	19,152	37,436	128,528	119,343	247,871

WESTERN AUSTRALIA									
Primary—									
Kindergarten				153	170	323	153	170	323
1	8,599	7,642	16,241	1,932	1,963	3,895	10,531	9,605	20,136
2	7,800	7,349	15,149	1,754	1,825	3,579	9,554	9,174	18,728
3	7,540	7,128	14,668	1,646	1,771	3,417	9,186	8,899	18,085
4	7,772	7,111	14,883	1,644	1,681	3,325	9,416	8,792	18,208
5	7,811	6,868	14,679	1,458	1,723	3,181	9,269	8,591	17,860
6	7,574	7,105	14,679	1,540	1,780	3,320	9,114	8,885	17,999
7	6,911	6,531	13,442	1,509	1,798	3,307	8,420	8,329	16,749
Special classes(c)	863	383	1,246				863	383	1,246
Secondary—									
1	7,035	6,416	13,451	1,822	2,138	3,960	8,857	8,554	17,411
2	6,522	5,917	12,439	1,627	1,957	3,584	8,149	7,874	16,023
3	5,329	4,424	9,753	1,517	1,733	3,250	6,846	6,157	13,003
4	1,658	1,296	2,954	933	887	1,820	2,591	2,183	4,774
5	1,127	770	1,897	789	655	1,444	1,916	1,425	3,341
Special classes(c)	308	193	501				308	193	501
Special schools(c)	555	351	906				555	351	906
Total	77,404	69,484	146,888	18,324	20,081	38,405	95,728	89,565	185,293

TASMANIA									
Pre-school	1,251	1,196	2,447	50	35	85	1,301	1,231	2,532
Primary—									
Kindergarten	1,137	1,061	2,198	108	124	232	1,245	1,185	2,430
1	4,895	4,482	9,377	989	991	1,980	5,884	5,473	11,357
2	3,820	3,516	7,336	622	633	1,255	4,442	4,149	8,591
3	3,638	3,315	6,953	627	639	1,266	4,265	3,954	8,219
4	3,676	3,374	7,050	531	687	1,218	4,207	4,061	8,268
5	3,598	3,357	6,955	614	653	1,267	4,212	4,010	8,222
6	3,280	3,163	6,443	618	690	1,308	3,898	3,853	7,751
Secondary—									
I	3,392	3,220	6,612	669	751	1,420	4,061	3,971	8,032
II	3,319	3,093	6,412	690	788	1,478	4,009	3,881	7,890
III	2,885	2,711	5,596	589	662	1,251	3,474	3,373	6,847
IV	1,659	1,368	3,027	568	653	1,221	2,227	2,021	4,248
V	392	352	744	248	207	455	640	559	1,199
VI	348	223	571	160	117	277	508	340	848
Special schools(c)	452	288	740		30	30	452	318	770
Total	37,742	34,719	72,461	7,083	7,660	14,743	44,825	42,379	87,204

(a) Pupils in special centres and classes at primary levels. (b) Speech and hearing classes at secondary level. (c) For physically and mentally, etc. handicapped children.

GOVERNMENT AND NON-GOVERNMENT SCHOOLS: PUPILS, BY GRADE, ETC.
AND SEX, STATES, ETC., 1966—continued

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
NORTHERN TERRITORY									
Kindergarten	27	17	44	..	..	..	27	17	44
I	609	483	1,092	85	82	167	694	565	1,259
II	404	358	762	77	67	144	481	425	906
III	314	302	616	53	70	123	367	372	739
IV	365	312	677	65	58	123	430	370	800
V	309	269	578	44	42	86	353	311	664
VI	293	293	586	42	57	99	335	350	685
VII	254	235	489	35	43	78	289	278	567
Ungraded(a)	15	13	28	..	..	..	15	13	28
VIII or 1st	214	210	424	23	21	44	237	231	468
IX or 2nd	170	168	338	5	13	18	175	181	356
X or 3rd	125	130	255	5	4	9	130	134	264
XI or 4th	..	..	..	..	7	7	45	45	90
5th	12	5	17	..	..	..	12	5	17
Ungraded(b)	1,162	1,156	2,318	731	745	1,476	1,893	1,901	3,794
Total	4,318	3,989	8,307	1,165	1,209	2,374	5,483	5,198	10,681

AUSTRALIAN CAPITAL TERRITORY

Infants—									
Kindergarten	1,031	943	1,974	422	386	808	1,453	1,329	2,782
1	947	924	1,871	388	339	727	1,335	1,263	2,598
2	913	806	1,719	366	325	691	1,279	1,131	2,410
Primary—									
3	821	745	1,566	354	321	675	1,175	1,066	2,241
4	787	764	1,551	301	304	605	1,088	1,068	2,156
5	764	768	1,532	263	296	559	1,027	1,064	2,091
6	708	632	1,340	291	299	590	999	931	1,930
Special primary grades(a)	91	55	146	..	..	..	91	55	146
Secondary—									
1st	679	661	1,340	348	288	636	1,027	949	1,976
2nd	668	586	1,254	309	314	623	977	900	1,877
3rd	508	514	1,022	288	270	558	796	784	1,580
4th	374	332	706	246	190	436	620	522	1,142
5th	283	188	471	196	117	313	479	305	784
5th year repeat	107	43	150	38	..	38	145	43	188
Total	8,681	7,961	16,642	3,810	3,449	7,259	12,491	11,410	23,901

(a) Opportunity classes. (b) Mainly Aboriginal children at special schools at missions and pastoral stations.

Teacher training and recruitment

Teachers for government schools

Recruitment of teachers. The teacher shortage evident in past years has now been overcome to a certain extent. Some States have no difficulty in recruiting and training sufficient staff to meet the present needs of primary schools. Despite expanded training programmes the shortage of secondary school teachers has proved a greater problem, especially in mathematics and science.

State Education Departments recruit most prospective teachers for government service from students leaving schools after a secondary course. Each Department offers training awards annually on the basis of academic merit and personal suitability. The traineeships cover the cost of a teacher training course (which may include university studies) and provide a living allowance. Students are usually required to enter into a bond to serve for a specified number of years in the government schools of the State where they have trained. In some States intending teachers can obtain a scholarship at Intermediate Certificate level to enable them to complete teachers' college entrance requirements. Such an award entails a bond of service for a longer period.

Training of primary school teachers. In most States teachers for government primary schools are trained in teachers' training colleges controlled and administered by the State Education Departments. These colleges are described on page 621. Generally, the duration of courses for primary teachers is two years; but several States are introducing a minimum three-year course for primary teachers. The basic subjects taken in the various courses are history and principles

of education, general and special methods of teaching in the primary school, school organisation, and educational psychology. In addition, students undertake courses in English (including speech training), mathematics, handicrafts, music, art, social studies, natural science, and physical and health education. Optional subjects may include dramatic art, visual aids, and so on. Supervised practice teaching in schools and the observation of demonstration lessons form part of all training courses. Since primary teachers in Australia may be called upon at some time to teach grouped classes in a small school or a 'one-teacher' school, special training for this kind of work is included in their course.

Training of secondary school teachers. Secondary teachers are normally specialists in a combination of subjects, such as English and history, modern languages, or mathematics and science. Intending secondary school teachers are normally required to complete a university degree and a year of professional training qualifying for a Diploma in Education. The degree courses followed are usually in arts, science, or economics, with the major studies providing the essential background for future subject teaching. During the post-graduate or professional year the student takes such subjects as the history and principles of education, comparative education, educational psychology, and special teaching methods. Training also includes practice teaching under the supervision of teachers college and university staff, and the observation of demonstration lessons.

At several Australian universities, students wishing to take up teaching as a profession can receive their professional training along with the study of their teaching subjects as part of a first degree course in Education. The time taken to complete such a Bachelor of Education degree course is four years.

Training for specialist teaching. Teachers of specialist subjects, such as music, art, manual arts, domestic science, and commercial subjects, receive from two to five years training which varies according to the institution concerned and the type of secondary school in which the teacher is to serve. In several States the shorter courses are provided wholly by the teachers colleges. In five States teachers of music receive their specialist training at conservatoria of music. Where the specialist course is given at an institution other than the teachers college—e.g. at a university, technical college, or conservatorium of music—as is usual for teachers of specialist subjects in high schools, trainees are required to attend teachers college or university lectures in education, and in some cases the specialist course is followed by a year of professional training. Courses designed to train physical education teachers are offered in universities in all States, and in four States at a teachers college as well.

Training for teachers of agricultural subjects in secondary schools is available in five States and consists of either an agricultural college diploma or a university degree course together with professional training. In New South Wales a two-year teachers college course in agriculture is available, and in Victoria there is a two-year agricultural college diploma course which follows on the normal two-year primary teachers course. Teachers of technical subjects in secondary schools may be trained in manual or industrial arts courses of two to four years duration, at teachers colleges, technical colleges, or, in one State, at a university. These courses include basic training in such subjects as wood and metal work, and geometrical drawing. In Victoria there is a separate Technical Teachers' College. Some teachers of trade subjects in technical schools are recruited from the ranks of qualified tradesmen engaged in industry or commerce. These teachers upon appointment usually receive instruction in classroom teaching techniques and procedures.

In-service training. As almost all teachers now enter the profession by way of teachers colleges or universities, where they receive basic professional training, in-service training in Australia is directed chiefly towards keeping teachers abreast of developments and adding to their basic training. In-service training usually takes the form of short courses held sometimes during vacations, sometimes during school-time or in the evening. In some States in-service courses for teachers in remote areas are provided by correspondence. Courses consist of discussions and lectures given by senior staff members of Education Departments and university and teachers college lecturers on such subjects as classroom techniques and supervision, librarianship, visual aids, music, arts and crafts, and physical education. In some States there are also in-service courses for special groups of teachers such as headmasters or teachers in one-teacher schools. In addition, district inspectors are responsible for organising short conferences of teachers, where professional topics are discussed. Education Departments encourage teachers to pursue university courses and in some States pay the cost of courses undertaken by selected teachers.

In 1966 and 1967 groups of Australian teachers again attended refresher courses in New Caledonia for Australian and New Zealand teachers of French. These courses were offered to the Australian Government by the French Government. The official publications of the Education Departments contain articles dealing with educational theory and practice. Magazines of the teachers' organisations, which reach the majority of government teachers, also contain articles of this type.

Status of teachers. Most teachers in governmental schools are permanent public servants and have security of tenure, superannuation rights, and the right of appeal in matters of promotion. The centralised education systems and the general policy of providing fully trained teachers for both city and country areas mean that teachers are subject to transfer to any part of the State in which they serve. It is common for a teacher's first appointment to be to a country school.

In each State there is a union of State school teachers and these together form a federal body, the Australian Teachers' Federation. Their aim is to advance the teachers' status and conditions and to stimulate community interest in educational problems.

Training of non-government school teachers

Teachers for non-government schools receive their training in a number of ways. The Roman Catholic Church staffs both its primary and secondary schools mainly with members of religious orders whose training has been obtained in conformity with the requirements of the particular order concerned. In recent years there has been a growth in the number of lay teachers being employed in Catholic schools, and training of students to become lay primary teachers has been instituted. Secondary teachers receive their academic training mostly through courses provided by Australian universities.

Other non-government schools tend to recruit their staffs from teachers who have already obtained qualifications in Australia or overseas. In New South Wales and Victoria non-government school authorities offer courses designed specially for teachers in their schools. Non-government schools recruit also university graduates, who are then given professional guidance by senior members of the school staff. In some instances private students may enrol at government teachers colleges on payment of a fee, but the number of places available is limited. Some teachers destined for non-government schools train in this way.

During vacations many non-government teachers attend in-service training courses organised by Education Departments. In recent years vacation courses have been provided by bodies other than Education Departments for teachers from both government and non-government schools. For example, an independent body, the Science Foundation for Physics within the University of Sydney, has provided such courses for teachers of science in secondary schools in New South Wales.

The training of pre-school teachers is carried out in five States in kindergarten training colleges set up by the Kindergarten Unions. These are described on page 621.

Other aspects of school education

Information relating to school medical and dental services is given in the chapter Public Health, and particulars of school savings banks in the chapter Private Finance.

Provisions for isolated areas

Although the task of bringing education to isolated areas in Australia presents problems, all education authorities have aimed at providing opportunities for country children comparable to those available to city children. Country children follow the same curricula (with local adaptation, if desirable) and are under the guidance of teachers who are trained for service in country and city schools alike.

In areas where there are sufficient children of school age a 'one-teacher' school may be formed with all primary grades in a single classroom under the control of the one teacher. Special training is given to teachers undertaking work of this kind. Children who complete a primary course in a one-teacher school and cannot attend a secondary school may do secondary correspondence lessons under the teacher's supervision.

In districts where a number of small centres are scattered around a larger centre or country town the tendency is to close the one-teacher schools and transport pupils each day by buses to a 'consolidated' school in the larger centre. Consolidated schools provide primary instruction and from two to four years of post-primary instruction. The post-primary curriculum adopted is usually directed towards practical activities and training in subjects bearing on the primary industries of the locality.

Where a group of children is too small to warrant the establishment of a one-teacher school at public expense, a 'subsidised' school may be opened. The Education Department pays part of the cost and in some States appoints a teacher. Some States also administer 'provisional' schools, which are completely financed by the Government but which are not large enough, or sufficiently assured of adequate continued attendance of pupils, to warrant classification as permanent schools.

Correspondence schools. These have been established in each State capital city to meet the needs of children whose daily attendance at school is prevented by distance between home and school, by illness or by physical disability. The correspondence schools also cater for inmates of penal

institutions, Australian children overseas, pupils of other schools in which particular courses are not available, student teachers, members of the Defence Forces, and other adults completing their secondary education. Where children are involved, lessons are done with the help of a supervisor, usually a member of the child's family, and posted back to the correspondence school in the capital city, where they are corrected and returned with helpful comments. Every endeavour is made to maintain a personal link between teacher and pupil. Correspondence schools began with primary grades only, but were soon extended to cater for secondary pupils, and it is now possible to do a complete secondary course to matriculation standard by correspondence. Each year more than 20,000 students receive all or part of their instruction by correspondence.

Schools of the air. These are intended to give the outback child of school age some of the benefits of school life and to supplement correspondence education. Using the two-way wireless equipment developed first by the Royal Flying Doctor Service, children hundreds of miles apart participate in the same lesson, and teacher and pupils can talk directly with each other. The first school of the air was established in 1950 at Alice Springs in the Northern Territory; it has been followed by similar schools at Broken Hill in the far west of New South Wales; Ceduna and Port Augusta in South Australia; Charleville, Mount Isa and Charters Towers in Queensland; and Meekatharra, Derby, Kalgoorlie, and Port Hedland in Western Australia. These eleven schools serve children in an area of a million square miles.

Handicapped children

Special provision is made for the education of physically and mentally handicapped children, both by the State authorities and by church and voluntary organisations, often working in conjunction. In many cases, where residential schools are necessary for particular groups, educational facilities and teaching staff are provided by a State Education Department, while a voluntary organisation provides accommodation and accepts responsibility for the general welfare of the children. Among the facilities available are: hospital schools for sick and crippled children; 'spastic centres' for cerebral palsied children; special schools and special classes for deaf children; schools for blind children; and special schools and classes for mentally retarded children. Special schools and classes have involved the appointment of departmental specialists, the provision of special training courses and close liaison with school health services. In some States, clinics attached to hospitals, or functioning as an independent child welfare service, handle cases of personality maladjustment and work in co-operation with the psychological services of the Education Departments.

Educational guidance

Each Australian State has a comprehensive system of educational guidance administered by trained and experienced educational psychologists and backed by a system of individual pupil record cards. The functions of these services are to provide: advice on suitability of various secondary studies for particular children, diagnosis and guidance of atypical children, preliminary guidance, and, in some States, research. The weight given to each of these functions varies from State to State, but the aim is to provide thorough educational guidance for all children.

Throughout Australia branches of the Commonwealth Employment Service co-operate with State Education Departments by giving post-school vocational guidance, using the data obtained during the school careers of the children and made available by the Education Departments. In New South Wales a similar service is also provided by the Youth Welfare Section of the State Department of Labour and Industry.

Research

All State Education Departments have set up branches undertaking research directed towards departmental activities. The work of the research branches is concerned with such matters as curriculum content, new teaching methods, evaluation procedures, wastage rates, and educational statistics.

School broadcasting and television

Over the years an extensive school broadcasting system has been developed in Australia by the co-operative efforts of the Australian Broadcasting Commission and education authorities. The Australian Broadcasting Commission's Education Department is responsible for preparing and broadcasting programmes, but it draws freely on the advice and services of teachers and maintains permanent liaison with State Education Departments. In 1966 approximately 96 per cent of Australian schools were equipped to receive radio broadcasts. It is estimated that, in 1966, 7,446 primary schools used school programmes.

School broadcasts are presented as part of the regular Australian Broadcasting Commission programmes without separate stations or wave lengths. Special efforts are made to relate the broadcasts to school work by the extensive distribution of booklets, giving details of programmes

in advance, and subject notes accompanied by picture sheets, work books, and teachers' notes. Broadcasting has proved to be a most effective way of reaching the outback children of Australia, and radio lessons have been designed to supplement correspondence lessons.

The year 1965 saw a further increase in the number of schools receiving television broadcasts and in the number of programmes produced. During 1964, after consultation with the six Education Departments, the Australian Broadcasting Commission increased its output of school television programmes, especially instructional programmes in mathematics and science for secondary schools. Direct teaching lessons designed for the senior forms were presented. At the same time most Education Departments began to subsidise the purchase of television sets, and by the end of 1966, 3,753 schools in Australia were equipped to use educational television programmes.

Scholarships and bursaries

All States have schemes of financial assistance to school pupils, mostly at the secondary level, through scholarships or bursaries. As tuition in government schools is free, this assistance is usually in the form of maintenance allowances, both for children living with their parents and for those living away from home. These may be paid in a lump sum or in instalments throughout the year. Awards are usually made on the results of a competitive examination, and sometimes a means test is applied. Other government and private authorities, such as the Repatriation Department and the Legacy War Orphans Fund, assist special categories of pupils with their school education. Many non-government schools also award scholarships, on a competitive basis, which enable students to attend the particular schools without payment of fees.

In 1964 the Commonwealth Government, with the co-operation of the State Departments of Education, introduced a programme of secondary scholarships to encourage successful candidates to complete the final two years of secondary schooling. Ten thousand of these scholarships are awarded each year. In addition, there are 2,500 scholarships for technical education each year.

School transport

All States have systems of subsidies whereby transport is made available free or at concession rates for children travelling to and from school. In some States allowances are paid if private transport has to be used.

School buildings

The great increase in the school population in the last decade led to an expansion in school building. To cope with this growth in population, it was necessary at first to make use of temporary and emergency structures, but the period of resorting to this expedient has now given way to one of consolidation and development in school building programmes. Quite large schools may be built in stages to match increases in local population in new and rapidly developing suburbs in metropolitan areas. Authorities are giving much attention to the use of new materials and especially to the planning of sites. An increasing number of schools are planned with playing fields and tennis courts. Gymnasiums which may also serve as assembly halls are included, and lighting, heating and ventilation to meet different climatic conditions are carefully planned.

During the period 1 July 1964 to 30 June 1968 a total of \$39,623,200 will have been provided by the Commonwealth Government for the building and equipping of science laboratories in both government and non-government schools. Non-government schools in the Australian Capital Territory and the Northern Territory no longer receive this assistance. In these areas the Commonwealth Government now meets interest charges on loans raised for approved building projects and also repays the amounts of capital borrowed in equal annual instalments over periods of twenty years.

Textbooks, materials and other equipment

The State Education Departments supply government schools, free of charge, with essential equipment, including scientific apparatus, maps, blackboards, chalk, and cleaning materials, and non-consumable equipment for commercial, home science and manual training. Garden tools and physical training equipment are also supplied in most States. Readers and writing equipment for individual pupils are usually supplied free in primary schools, and several Education Departments produce monthly school magazines which are supplied free or cheaply. In primary schools (except in one State where textbooks are made available free to children in both government and non-government primary schools) and in secondary schools, textbooks must, however, be purchased by students. In several States schools own stocks of textbooks which are hired to students, and in one State secondary textbooks are sold at reduced prices. In four States certain textbook costs are subsidised for pupils attending government and non-government schools. Equipment such as radios, television sets, film and filmstrip projectors, pianos, duplicators, and

library books is ordinarily purchased for individual schools by the parent and citizen organisations associated with them, with the assistance of subsidies from the Departments.

The design of school furniture is undergoing considerable change following research on posture and the physical measurement of children. Dual desks are now being replaced in many schools by individual tables and chairs, provided in a range of sizes suitable to each class. In line with modern educational practice, the new type of furniture has been designed to allow more flexible arrangements of the classroom.

Visual aids

Visual aids are widely used in Australian education. Each of the State Education Departments has a visual education branch to handle the production and distribution of such materials. Film strips and posters are distributed free or at low cost. Films are held in central libraries and are requisitioned by schools as required for teaching purposes.

Pre-school education

Pre-school centres of various kinds are conducted by approved private individuals, by church bodies and by voluntary organisations such as the Kindergarten Unions. Over recent years the Commonwealth Government, State Governments and some municipal councils have provided an increasing amount of financial assistance and they themselves maintain centres.

The Australian Pre-School Association is a federal body composed of the Kindergarten Unions and several other organisations. Its aim is to promote the development of pre-school education throughout Australia. It is also responsible for the administration of six Lady Gowrie Child Centres which were established in capital cities by the Commonwealth Government as model pre-school centres. Pre-school centres are located in city and country areas. Programmes are adapted to suit the areas in which centres are situated. Types of pre-school centres are nursery kindergartens, crèches with full-day care for children in closely settled industrial areas, play groups and play centres, occasional care centres, and residential holiday homes. Pre-school centres can cater for only a small proportion of children in the three- to five- or six-year age group, but radio and television have brought a form of education within the reach of practically every pre-school child in Australia. 'Kindergarten of the Air', the first programme of its kind in the world, is a session of twenty-five minutes broadcast every week-day over the national radio network of the Australian Broadcasting Commission. Through it, young children in hospitals, in homes in city and country towns and in bush homesteads in the outback, perhaps many miles from any school, receive many of the advantages of pre-school training. 'Play-school' is a 30-minute television programme transmitted each week-day. It is based on the interests of children from three to five years and is now broadcast in all State capital cities and in many country regions by the Australian Broadcasting Commission.

Technical education

The following description of technical education refers to training in technical fields given by institutions other than secondary schools and universities. Students may proceed to this kind of training after completing three to five years at secondary school. Each State has developed a system of technical education based on institutions set up in all the State capital cities and in many country areas. These institutions are known variously as technical colleges, technical schools, institutes of technology, and schools of mines. The earliest began as local and even private ventures in the second half of the nineteenth century, but almost all of them have now come under the control of the State Governments.

The technical schools and colleges in Queensland, South Australia, Western Australia, and Tasmania are administered by branches of the State Education Departments. In Western Australia and South Australia the Institutes of Technology function as autonomous institutions. Certain recommended technical colleges and institutes are assisted by special Commonwealth Government grants introduced in 1965 following recommendations of a Committee set up to consider the future of tertiary education in Australia. New South Wales has a separate State Department of Technical Education. In Victoria there is a dual system with a number of the older colleges controlled by their own 'councils' in addition to government-controlled colleges administered by the Technical Education Branch of the Education Department. The council-controlled colleges receive government grants-in-aid.

Australian technical colleges offer training in all the major industrial skills and in a wide variety of commercial, artistic and domestic occupations. The three main types of courses are described on page 600.

Trade courses

These offer part-time training for apprentices. In developing a system of technical education, the Australian authorities were influenced by the British tradition which regards practical experience on the job as the fundamental training procedure, to be supplemented by theoretical and practical training at an appropriate school. In each of the Australian States there is an apprenticeship authority which supervises the administration of apprenticeships, and an education authority which provides technical education through its technical colleges.

Most students who wish to become tradesmen leave school on the completion of three or four years of secondary schooling at about sixteen years of age. An increasing proportion, however, is entering at higher educational levels and receiving credit for this. On entering apprenticeship in one of the trades, the young apprentice is required to enrol in an appropriate trade course in one of the network of technical colleges in capital cities and large country towns.

The time spent on training varies from three to five years in different trades and States. Between four and eight hours instruction a week are required. Most of this takes place in the employer's time, and it is unusual for more than two hours a week to be spent in attending classes outside working hours.

Certificate courses

These courses are designed to provide training in technical occupations and in some cases can be counted towards a diploma course. Certificate courses vary in length from State to State, but generally speaking they last from two to seven years. Attendance may be full-time for all or part of the course, or wholly part-time. Usually there are no occupational requirements for admission to a certificate course, and students who have completed a related trade course may be admitted together with other students to a certificate course. Educational requirements in most cases specify possession of an Intermediate level examination certificate, which may need to include passes at appropriate levels in certain specified subjects. In addition, in New South Wales the Department of Technical Education conducts the Certificate Entrance Examination, a pass in which qualifies a student for attendance at a technical college. Courses are offered in subjects such as accountancy, electrical fitting and mechanics, wool classing, and architectural drafting.

Diploma courses

Diploma courses are designed to provide professional training in fields such as architecture, art, building, commerce, management, public administration, manual arts, the various branches of engineering and metallurgy, and pure and applied science. They usually follow completion of a full secondary school course. The courses consist of complete progressive units of study in which the lecture room, laboratory and workshop are closely associated. They vary from three to five years full-time and from three to seven years part-time study. At least one full year of employment in an appropriate occupation is usually required. The aim of the courses is to develop highly trained technologists with the qualifications and experience required for membership of a professional institution.

While quite separate and distinct from a university course, a diploma course covers much the same ground as the early years of a university course. A diplomate who has matriculated is likely to be granted substantial exemptions in a related university course.

Other technical courses

Most colleges provide short post-diploma and refresher courses to keep students in touch with new developments in their fields, as well as courses of general interest, such as handicrafts and motor mechanics. Training in certain technical aspects of agriculture such as farm mechanics and wool classing is often given in the technical colleges. Some also offer general secondary courses to enable adults to prepare for matriculation and other public examinations.

Technical correspondence teaching

Each State has a well developed system of technical education by correspondence to extend the facilities of a metropolitan college to rural students. Entrance qualifications are identical with those for the regular classes. A major problem of correspondence work is the linking of theory with practice. This is overcome to a certain extent by holding practical sessions at appropriate training centres once or twice a year at the technical college where the correspondence school is based, or at a mobile workshop stationed for the time at a focal point within the district. In New South Wales these mobile workshops are rail cars equipped with machinery and fittings to make them self-contained training schools for engineering and other trades. Among practical courses offered by correspondence are trade drawing, fitting and machinery, welding, diesel engine operation, automotive engineering and workshop practice, and farm mechanics.

Technical colleges, teachers and students

The numbers of colleges, teachers and enrolments during the years 1961 to 1965 are given in the following table.

TECHNICAL EDUCATION: COLLEGES, TEACHERS AND ENROLMENTS
STATES AND TERRITORIES, 1961 TO 1965

State or Territory	Colleges	Teachers			Students enrolled		
		Full-time	Part-time	Total	Males	Females	Persons
New South Wales(a)(b)(c)(d)—							
1961	51	1,302	2,051	3,353	r76,282	r37,161	r113,443
1962	52	1,348	2,390	3,738	r82,769	r38,884	r121,653
1963	52	1,474	r2,732	r4,206	r87,477	r40,219	r127,696
1964	53	1,535	3,099	4,634	r94,663	r41,022	r135,685
1965	54	1,570	3,140	4,710	98,840	41,377	140,217
Victoria(e)—							
1961	63	r2,552	r2,146	r4,698	47,053	13,424	60,477
1962	70	r2,773	r2,219	r4,992	48,939	12,487	61,426
1963	73	r3,080	r2,290	r5,370	50,325	13,456	63,781
1964	73	r3,378	r2,363	r5,741	52,031	13,399	65,430
1965(f)	79	3,724	2,586	6,310	n.a.	n.a.	79,287
Queensland(d)—							
1961	r15	r201	r825	r1,026	r24,996	r9,884	r34,880
1962	15	r209	r882	r1,091	r24,780	r11,395	r36,175
1963	15	r229	r977	r1,206	r29,044	r12,860	r41,904
1964	r15	r235	r1,067	r1,302	r31,082	r12,002	r43,084
1965(g)	14	279	620	899	29,715	6,740	36,455
South Australia—							
1961(h)	25	363	712	1,075	15,596	8,457	24,053
1962(h)	24	387	827	1,214	17,599	10,177	27,776
1963(i)	24	r453	r954	r1,407	18,661	11,291	(i)34,330
1964(i)	25	r462	r1,101	r1,563	19,956	11,503	(i)35,937
1965(i)	25	520	1,153	1,673	21,805	13,214	(i)39,856
Western Australia(d)(j)—							
1961	20	r325	r881	r1,206	r26,508	r14,585	r41,093
1962	25	352	1,136	1,488	r29,374	r15,531	r44,905
1963	32	r373	1,257	1,630	r30,251	r15,362	r45,613
1964	32	444	r1,398	r1,842	r34,399	r16,711	r51,110
1965	36	505	1,632	2,137	37,326	18,114	55,440
Tasmania—							
1961	12	97	383	480	4,871	1,427	6,298
1962	11	95	414	509	4,884	1,763	6,647
1963	10	90	449	539	5,564	2,023	7,587
1964	9	102	488	590	5,520	2,023	7,543
1965	12	146	442	588	5,501	2,110	7,611
Northern Territory—							
1961	2	4	53	57	r574	r419	r993
1962	2	4	54	58	r582	r424	r1,006
1963	2	1	66	67	r706	r552	r1,258
1964	2	1	72	73	r712	r579	r1,291
1965	2	1	100	101	947	942	1,889
Total—							
1961	r188	r4,844	r7,051	r11,895	r195,880	r85,357	r281,237
1962	199	r5,168	r7,922	r13,090	r208,927	r90,661	r299,588
1963	208	r5,700	r8,725	r14,425	r222,028	r95,763	r322,169
1964	r209	r6,157	r9,588	r15,745	r238,363	r97,239	r340,080
1965	222	6,745	9,673	16,418	n.a.	n.a.	360,755

(a) Students enrolled represent gross enrolments, no allowance having been made for students enrolled in more than one course. (b) Includes Australian Capital Territory. Gross enrolments at Canberra Technical College were as follows: 1961, 1,889; 1962, 2,431; 1963, 2,895; 1964, 3,551; 1965, 4,267. (c) Figures include teachers and students at technical colleges and at other centres, such as high school classrooms, in which technical classes are conducted. (d) Includes correspondence course teachers and students. (e) Teachers include those at both senior and junior technical colleges. Revised figures exclude technical studentship holders. Student instructors are now shown as part-time teachers instead of full-time. (f) Student enrolment figures for 1965 are not comparable with those shown for earlier years. The census of students is now conducted in May instead of August and hence includes students taking short courses offered in the first term only, and students who discontinue their courses after the first term. (g) The figures for 1965 reflect the major reorganisation of technical education introduced at the beginning of the year. In addition to the establishment of the Institute of Technology, entry standards were raised, and the minimum number of students required to commence classes was also raised. (h) Excludes correspondence teachers and students. (i) Total students includes students enrolled in correspondence courses. Teacher figures include correspondence course teachers. (j) Teachers represent number of teaching positions.

Training of technical instructors

Prior to the 1939-45 War technical colleges were staffed chiefly by trained teachers in the employment of the Education Departments or technicians drawn from industry. Although some of the latter were highly qualified, the great majority had not been trained as teachers.

To preserve links with industry and trade practice, schemes have been developed which continue the recruitment of specialist tradesmen as instructors but provide also for their training in educational method and teaching techniques. In Victoria the Technical Teachers' College provides training for students with appropriate diploma or trade qualifications and suitable industrial experience. In New South Wales technical college lecturers and tradesmen-instructors receive an in-service course of teacher training in general educational theory and teaching method, while correspondence courses and visiting lecturers assist the newly appointed tradesman-instructor in country colleges. Variations of this scheme are in operation in other States. Many technical teachers, principally of academic, commercial and domestic science subjects, hold trained teachers certificates from teachers colleges.

Government expenditure on schools and technical education

The following tables show particulars of the total net expenditure (i.e. gross expenditure less receipts for services rendered) from certain funds on government schools, education departments and technical education. The data have been compiled on the same basis as far as differences in organisation and accounting methods between States and Territories will permit. The tables include only expenditure from the consolidated revenue funds and certain trust or special funds. They exclude loan fund expenditure; expenditure on debt charges, pay-roll tax and superannuation payments, in so far as it is possible to identify these items; and some items for which information cannot be obtained from the public accounts of all States.

Government schools' and education departments' expenditure

The figures relate throughout to years ended 30 June. Net expenditure per pupil relates the total net expenditure to the mean of the numbers of pupils enrolled at government schools at two consecutive school censuses. Net expenditure per head of population relates the total net expenditure to the mean population.

GOVERNMENT SCHOOLS AND EDUCATION DEPARTMENTS: NET EXPENDITURE STATES AND TERRITORIES, 1961-62 TO 1965-66

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
TOTAL NET EXPENDITURE									
(\$'000)									
1961-62	101,868	68,344	30,218	27,011	20,204	10,854	856	1,826	261,181
1962-63	108,088	76,262	33,604	29,540	21,684	11,678	932	2,224	284,012
1963-64	119,778	84,756	37,246	33,363	23,894	12,966	1,087	2,498	315,588
1964-65	140,803	91,593	40,011	36,380	26,810	14,413	1,352	3,264	354,626
1965-66	148,835	101,617	43,008	40,408	30,751	15,476	1,634	3,502	385,231

TOTAL NET EXPENDITURE PER PUPIL									
(\$)									
1961-62	167.88	152.49	122.07	152.99	159.03	160.84	180.59	176.05	154.67
1962-63	174.53	164.63	133.45	161.40	164.75	169.27	176.88	190.69	163.70
1963-64	190.18	177.12	145.81	175.24	176.11	184.86	182.14	192.05	177.40
1964-65	218.83	184.79	153.87	183.16	192.51	202.63	202.33	226.13	193.86
1965-66	224.50	197.72	161.54	195.65	213.67	214.83	214.30	220.00	203.91

TOTAL NET EXPENDITURE PER HEAD OF POPULATION									
(\$)									
1961-62	25.80	23.10	19.79	27.56	27.09	30.43	32.22	29.25	24.63
1962-63	26.92	25.24	21.66	29.57	28.37	32.25	33.76	32.13	26.27
1963-64	29.31	27.42	23.67	32.71	30.55	35.41	36.16	32.35	28.62
1964-65	33.87	28.90	25.07	34.87	33.62	39.16	41.68	38.60	31.53
1965-66	35.41	31.84	26.10	37.49	37.28	41.90	45.11	37.82	33.66

(a) Figures include expenditure on adult education which amounted to \$1,398 in 1961-62, \$2,148 in 1962-63, \$916 in 1963-64, \$1,092 in 1964-65, and \$887 in 1965-66.

The following table shows, for the six States, the net expenditure on government schools and education departments classified into the following headings: primary education, secondary education, administration, transportation of school children and students, and training of teachers. Expenditure on technical and agricultural education is excluded from the tables.

It has been necessary to estimate some items of expenditure, largely because the meanings of 'primary' and 'secondary' differ between States and because elementary and higher educations are sometimes given in the same school by the same teachers. Expenditure on government schools in the Northern Territory and Australian Capital Territory is not included in the following table because the detail is not available.

GOVERNMENT SCHOOLS AND EDUCATION DEPARTMENTS: CLASSIFICATION
OF EXPENDITURE, STATES, 1961-62 TO 1965-66
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total(a)
PRIMARY EDUCATION							
1961-62 . . .	54,050	35,538	19,434	13,242	10,572	4,046	136,882
1962-63 . . .	55,880	38,976	20,816	13,992	11,154	4,330	145,148
1963-64 . . .	60,824	42,590	21,066	15,586	12,258	4,990	157,314
1964-65 . . .	70,199	45,492	20,995	16,640	13,800	5,521	172,647
1965-66 . . .	70,612	49,930	22,050	18,136	15,714	5,868	182,310
SECONDARY EDUCATION							
1961-62 . . .	33,102	18,000	6,906	9,710	5,166	3,670	76,554
1962-63 . . .	35,386	20,460	8,094	10,964	5,918	3,958	84,780
1963-64 . . .	40,706	23,852	10,458	12,699	6,686	5,034	99,435
1964-65 . . .	49,992	26,027	12,778	14,193	7,522	5,678	116,190
1965-66 . . .	54,337	29,463	13,809	15,915	9,247	6,080	128,851
ADMINISTRATION							
1961-62 . . .	4,148	1,672	1,276	530	716	1,118	9,460
1962-63 . . .	4,138	1,780	1,344	600	750	1,374	9,986
1963-64 . . .	4,522	1,906	1,484	698	858	810	10,278
1964-65 . . .	5,503	2,232	1,571	813	1,021	833	11,973
1965-66 . . .	6,237	2,357	1,794	848	909	904	13,049
TRANSPORTATION OF SCHOOL CHILDREN AND STUDENTS							
1961-62 . . .	4,564	5,048	1,556	1,134	2,108	1,230	15,640
1962-63 . . .	5,300	5,352	1,806	1,172	2,170	1,284	17,084
1963-64 . . .	5,582	5,600	2,076	1,270	2,362	1,336	18,226
1964-65 . . .	5,867	6,009	2,474	1,312	2,611	1,418	19,691
1965-66 . . .	7,342	6,414	2,770	1,424	2,673	1,500	22,123
TRAINING OF TEACHERS							
1961-62 . . .	6,004	8,086	1,046	2,395	1,642	790	19,963
1962-63 . . .	7,384	9,694	1,544	2,812	1,692	732	23,858
1963-64 . . .	8,144	10,808	2,162	3,110	1,730	796	26,752
1964-65 . . .	9,242	11,833	2,193	3,422	1,856	963	29,509
1965-66 . . .	10,307	13,453	2,585	4,085	2,208	1,124	33,762

(a) Excludes Northern Territory and Australian Capital Territory.

Technical education expenditure

The following table shows the net expenditure on technical education from the State consolidated revenue funds, together with expenditure in the Australian Capital Territory.

**TECHNICAL EDUCATION: NET EXPENDITURE, STATES AND
AUSTRALIAN CAPITAL TERRITORY, 1961-62 TO 1965-66**

(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
1961-62 . . .	9,264	13,280	1,966	840	2,176	492	146	28,164
1962-63 . . .	9,530	15,712	2,144	960	2,336	688	162	31,532
1963-64 . . .	10,684	18,048	2,044	1,330	2,772	732	211	35,821
1964-65 . . .	12,637	19,963	1,892	1,386	3,426	813	305	40,422
1965-66 . . .	13,137	22,864	2,677	1,216	4,240	946	445	45,525

Non-government schools' finance

Most Roman Catholic parochial schools charge fees, but payment is not insisted on in the case of families who cannot afford it. At the majority of non-government secondary schools privately endowed scholarships are available in varying numbers, and reductions in fees are normally made for children of clergy or for two or more members of one family attending the same school. With these exceptions, pupils of non-government schools must pay fees.

Certain State scholarships and bursaries are tenable at approved non-government secondary schools. Since the establishment of educational systems by the State Governments, official policy has been largely against the provision of direct financial assistance to non-government schools. Most States, however, have come to assist non-government schools in approved building projects. This assistance takes the form of payment of interest charges on loans raised for the extension of teaching space. The eight undenominational grammar schools in Queensland receive a State subsidy. In 1956 the Commonwealth Government undertook to contribute to the interest payments on loans raised in order to build non-government secondary school accommodation in the Australian Capital Territory and the Northern Territory. As from 1964-65 the Commonwealth Government has provided assistance to non-government schools for the building and equipping of science laboratories (*see* page 598). In the Australian Capital Territory and the Northern Territory these grants were superseded, in November 1965, by a scheme, extended to cover kindergarten and primary schools, under which the Commonwealth Government contributes to interest payments on loans raised to finance new buildings, extensions and additions to buildings, and expenditure of a capital nature on teaching equipment, and repays the loans in equal annual instalments over a period of twenty years.

Universities

Students qualify for entrance to Australian universities by passing a matriculation examination in one of the States after five or six years of secondary education. Each university has its own regulations for matriculation, specifying the number and combination of subjects to be passed for admission. Students entering the universities have the choice of undergraduate study in various faculties. All universities provide also postgraduate courses of study. The Australian universities, with their faculties or schools, are listed below in the order of their foundation.

University of Sydney, 1850, Sydney, New South Wales: Agriculture, Architecture, Arts, Dentistry, Economics, Engineering, Law, Medicine, Science, Veterinary Science.

University of Melbourne, 1853, Melbourne, Victoria: Agriculture, Applied Science, Architecture, Arts, Dental Science, Economics and Commerce, Education, Engineering, Law, Medicine, Music, Science, Veterinary Science.

University of Adelaide, 1874, Adelaide, South Australia: Agricultural Science, Architecture and Town Planning, Arts, Dentistry, Economics, Engineering, Law, Medicine, Music, Science, Technology and Applied Science.

University of Tasmania, 1890, Hobart, Tasmania: Agricultural Science, Arts, Commerce, Education, Engineering, Law, Medicine, Science.

University of Queensland, 1909, Brisbane, Queensland: Agriculture, Architecture, Arts, Commerce and Economics, Dentistry, Education, Engineering, Law, Medicine, Science, Veterinary Science.

University of Western Australia, 1912, Perth, Western Australia: Agriculture, Architecture, Arts, Dental Science, Economics and Commerce, Education, Engineering, Law, Medicine, Science.

Australian National University, 1946, Canberra, Australian Capital Territory: Institute of Advanced Studies—John Curtin School of Medical Research, Research School of Physical Sciences, Research School of Social Sciences, Research School of Pacific Studies; School of General Studies (formerly Canberra University College, established in 1930)—Arts, Economics, Law, Oriental Studies, Science.

University of New England, 1954 (formerly New England University College, established in 1938), Armidale, New South Wales: Agricultural Economics, Arts, Economics, Rural Science, Science.

University of New South Wales, 1958 (formerly the New South Wales University of Technology, established in 1948), Sydney, New South Wales: Applied Science, Architecture, Arts, Commerce, Engineering, Medicine, Science.

Monash University, 1958, Melbourne, Victoria: Arts, Economics and Politics, Education, Engineering, Law, Medicine, Science.

University of Newcastle, 1965 (formerly Newcastle University College, established in 1951), Newcastle, New South Wales: Applied Science, Architecture, Arts, Commerce, Engineering, Science.

Flinders University of South Australia, 1966, Bedford Park, South Australia: Language and Literature, Social Sciences, Physical Sciences, Biological Sciences.

La Trobe University, 1967, Bundoora, Victoria: Biological Sciences. Humanities, Physical Sciences, Social Sciences.

Macquarie University, 1967, North Ryde, New South Wales: Behavioural Sciences, Biological Sciences, Chemistry, Earth Sciences, Economic and Financial Studies, Education, English Studies, Historical, Philosophical and Political Studies, Mathematics and Physics, Modern Languages.

Each of the universities was established by a parliamentary Act as an autonomous institution, with its own Governing Council or Senate. Nevertheless, the Australian universities receive substantial government support from both State and Commonwealth sources, only part of their income being derived from students' fees, private donations and bequests.

There are also two university colleges. Townsville University College, founded in 1961, is a part of the University of Queensland. It offers some courses in the faculties of Agriculture, Arts, Commerce and Economics, Dentistry, Education, Engineering, Law, Medicine, Science, and Veterinary Science. Wollongong University College was opened in 1962 and is affiliated with the University of New South Wales. It offers some courses in the faculties of Arts, Commerce, Engineering, and Science.

Organisation of courses

Bachelor degree courses are from three to six years in length, depending on the faculty, and for the majority full-time attendance is required. Certain courses, however, may also be undertaken by part-time or evening students. The university academic year begins in March and finishes in early December. At most universities two short vacation periods divide the year into three terms, but there are four terms in some universities.

Several universities make provision for external tuition, whereby students living away from university towns may take a restricted number of courses by correspondence. The University of Queensland has developed a system of correspondence tuition which now caters not only for students within the State but also for those in the Northern Territory, Papua and New Guinea, adjacent Pacific islands, and Asian countries. External students living in Queensland receive tutorial assistance at university centres in the principal country towns.

The University of New England's Department of External Studies offers a wide range of subjects for external study, leading to the degrees of Bachelor of Arts, Bachelor of Letters, Bachelor of Education, the Diploma in Education, and the Diploma in Educational Administration. External students must attend short annual residential schools of instruction in their subjects, usually held at the university.

Post-graduate courses leading either to a Master's degree or to a Doctorate are available at all universities. Facilities cover the humanities, social sciences and pure and applied sciences. Additional courses are constantly being introduced by the universities at both the undergraduate and the post-graduate level to cover new fields of knowledge and specialisation. Among announcements of new courses made in 1966 were: at the University of Sydney, Bachelor of Social Studies; at the University of New South Wales, Diploma in Education and Master of Education; at Monash University a Faculty of Education was established; and at the University of Western Australia a Faculty of Architecture was established.

Research

A wide range of research work and training in research techniques is carried out by the universities as part of their normal functions. Post-graduate students and members of university staff are engaged in research, both as part of their work for post-graduate degrees and also as part of group and departmental research programmes. Support for research in universities is derived from public and private sources, including funds and foundations established to encourage research in a particular field.

University expansion and development

Since the 1939-45 War the Australian universities have had to face greatly increased demands on their facilities, firstly from large numbers of ex-service personnel in the immediate post-war years and later from greatly increased numbers of students leaving secondary schools each year. By 1966 the total enrolments in Australian universities had reached a figure of 91,272, compared with an early post-war peak of 32,453 in 1948.

To assist the universities to cope with these demands, increasing co-operation between the Commonwealth Government and the State Governments in university finance became necessary. The Commonwealth Government set up a Committee on Australian Universities, whose 1957 report ('The Murray Report') led to more finance becoming available to universities and to the setting up of a permanent body, the Australian Universities Commission, to advise the Commonwealth Government on university development. In the years since the Murray Report the following major developments have taken place in the Australian university structure: the University of New South Wales was created from the earlier University of Technology in 1958; in the same year Monash University was established in Victoria; in 1960 the Australian National University was reconstituted, combining both undergraduate and post-graduate facilities, and now consists of the Institute of Advanced Studies and the School of General Studies created from the Canberra University College; the University of Queensland set up the University College of Townsville in 1961; the University of New South Wales established the Wollongong University College in 1962; in 1965 the University of Newcastle was created from the Newcastle University College; in 1966 the University of Adelaide at Bedford Park became The Flinders University of South Australia; and in 1967 Macquarie University and La Trobe University were established in New South Wales and Victoria respectively.

The Queensland Government is proceeding with plans for the construction of a third university institution at Mount Gravatt. It is expected that the campus will be established within the next four years as a satellite of the University of Queensland.

Despite their expansion, the Australian universities are still faced with a problem in providing tuition for all students who reach matriculation standard and wish to take up university courses. As a result, several universities have found it necessary to impose quotas on enrolments in their courses.

University teaching and research staff

The following tables show particulars of the teaching and research staff of the universities during 1966 and earlier years.

UNIVERSITIES: TEACHING AND RESEARCH STAFF(a), 1966

University	Full-time teaching and research staff					Part-time teaching and research staff(c)	Full-time research only staff	Part-time research only staff(d)
	Professors	Associate professors and readers	Senior lecturers and lecturers	Assistant lecturers, demonstrators, etc.(b)	Total			
Australian National	32	23	142	49	246	154	686	..
Sydney	86	81	496	225	888	1,374	334	11
New South Wales	77	71	481	183	812	831	140	..
New England	27	27	142	99	295	26	34	..
Newcastle	19	5	105	11	140	110	10	2
Macquarie	12	..	8	..	20	..	1	..
Melbourne	82	95	545	155	877	1,006	220	35
Molbourne	55	13	292	133	493	441	43	3
La Trobe	11	..	..	11	..	..	2	..
Queensland	65	68	447	225	805	635	166	5
Adelaide	64	51	313	69	497	422	222	9
Flinders	15	1	32	10	58	56	14	1
Western Australia	44	38	206	67	355	427	145	5
Tasmania	26	14	88	35	163	213	40	11
Total	615	487	3,297	1,261	5,660	5,695	2,057	82

(a) Filled positions. Teaching and research staff includes all staff with teaching functions, but excludes research only staff which is shown separately. (b) Includes tutors and teaching fellows. (c) Teaching hours in units of 100 hours per annum. (d) In equivalent full-time units of 35 hours per week.

UNIVERSITIES: TEACHING AND RESEARCH STAFF(a), AUSTRALIA, 1962 TO 1966

Year	Full-time teaching and research staff					Part-time teaching and research staff(c)	Full-time research only staff	Part-time research only staff(d)
	Professors	Associate professors and readers	Senior lecturers and lecturers	Assistant lecturers, demonstrators, etc.(b)	Total			
1962	363	330	2,438	770	3,901	3,472	1,369	27
1963	404	374	2,663	848	4,289	3,847	1,481	35
1964	463	409	2,847	1,004	4,723	4,358	1,675	45
1965	521	449	3,050	1,085	5,105	5,167	1,752	56
1966	615	487	3,297	1,261	5,660	5,695	2,057	82

(a) Filled positions. Teaching and research staff includes all staff with teaching functions, but excludes Research only staff which is shown separately. (b) Includes tutors and teaching fellows. (c) Teaching hours in units of 100 hours per annum. (d) In equivalent full-time units of 35 hours per week.

University students enrolled

The numbers of students enrolled for courses at the universities for 1966 and earlier years are shown in the following tables.

UNIVERSITIES: STUDENTS ENROLLED, 1966

University	Degree courses	Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
		Post-graduate	Sub-graduate			
Australian National	3,168	..	..	..	116	3,170
Sydney	15,467	859	115	..	366	16,660
New South Wales	12,059	320	159	15	784	13,285
New England	3,893	355	..	1	48	4,269
Newcastle	1,893	72	1	..	57	2,013
Macquarie	8	..	..	..	..	8
Melbourne	12,775	100	646	..	787	13,903
Monash	5,769	213	..	..	10	5,934
Queensland	13,612	125	554	142	388	14,821
Adelaide	7,865	115	1,100	23	311	8,947
Flinders	407	9	..	..	1	417
Western Australia	5,246	161	..	..	110	5,499
Tasmania	1,851	124	50	86	266	2,346
Total	84,013	2,453	2,625	267	3,244	91,272

(a) Includes *ad hoc* courses. (b) Adjustment made for students enrolled for more than one course.

Of the students enrolled in 1966, 66,303 were males and 24,969 females. Included in those enrolled for degrees were 7,560 enrolled for higher degree courses: Australian National University, 613; Sydney, 1,871; University of New South Wales, 1,087; New England, 197; Newcastle, 94; Macquarie, 8; Melbourne, 1,140; Monash, 372; Queensland, 789; Adelaide, 649; Flinders, 26; Western Australia, 573; and Tasmania, 141.

UNIVERSITIES: STUDENTS ENROLLED, AUSTRALIA, 1962 TO 1966

Year	Degree courses		Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
	Higher degrees	Bachelor degrees	Post-graduate	Sub-graduate			
1962	3,814	50,757	1,622	r3,210	r1,795	r2,930	63,317
1963	4,551	56,077	1,764	r3,251	r1,437	r2,589	69,074
1964	5,383	62,936	1,984	r3,377	r650	r2,854	76,188
1965	6,169	69,540	2,146	r3,277	r346	r3,117	83,320
1966	7,560	76,453	2,453	2,625	267	3,244	91,272

(a) Includes *ad hoc* courses. (b) Adjustment made for students enrolled for more than one course.

University new students enrolled

The numbers of new students enrolled for courses at the universities during 1966 and earlier years are shown in the following tables.

UNIVERSITIES: STUDENTS ENROLLED, AUSTRALIA

1962 TO 1966

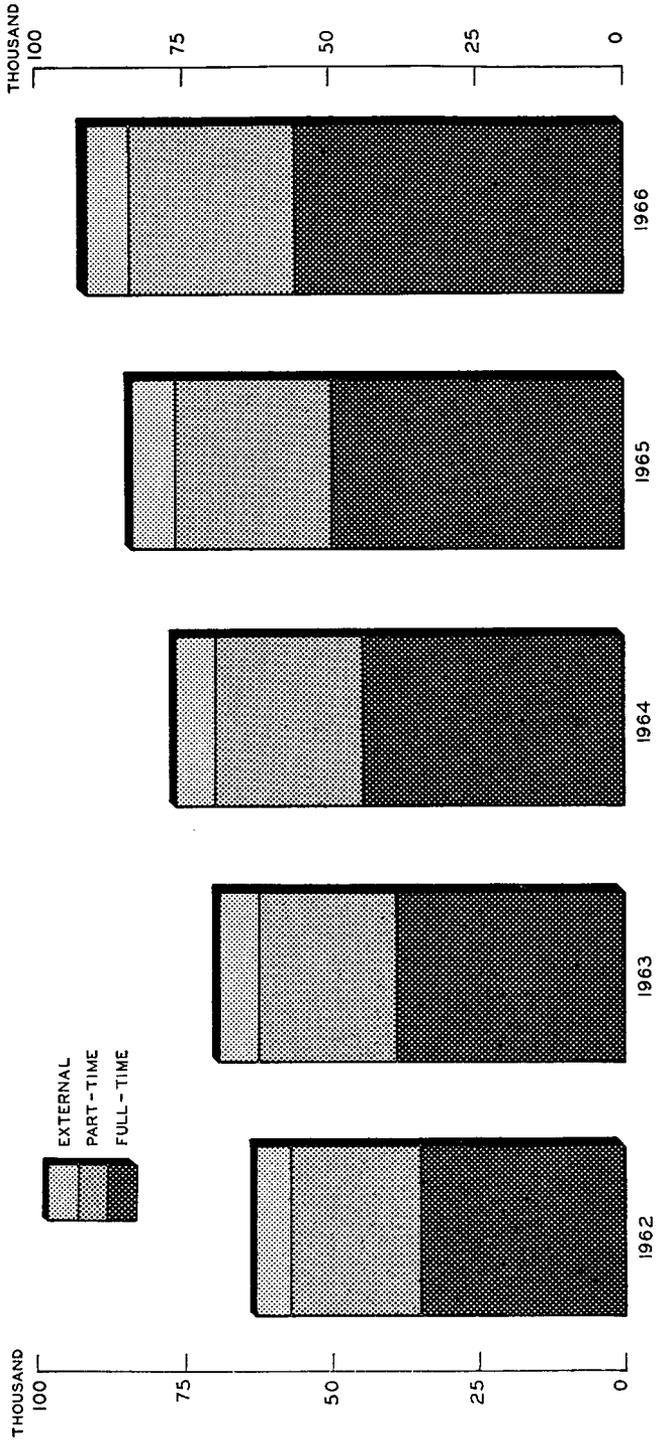


PLATE 37

UNIVERSITIES: NEW STUDENTS ENROLLED, 1966

University	Degree courses	Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
		Post-graduate	Sub-graduate			
Australian National	1,117	..	..	..	87	1,169
Sydney	3,391	220	16	..	171	3,798
New South Wales	4,005	136	31	15	560	4,740
New England	1,233	128	..	1	22	1,381
Newcastle	633	7	..	..	23	663
Macquarie	8	..	..	..	..	8
Melbourne	2,645	19	171	..	255	2,990
Monash	2,393	63	..	..	2	2,429
Queensland	3,434	10	133	33	113	3,723
Adelaide	1,930	2	132	1	39	2,098
Flinders	407	9	..	..	1	417
Western Australia	1,378	9	..	..	29	1,416
Tasmania	573	4	7	13	93	688
Total	23,147	607	490	63	1,395	25,520

(a) Includes *ad hoc* courses. (b) Adjustment made for students enrolled for more than one course.

Of the new students enrolled in 1966, 17,312 were males and 8,208 females. Included in those enrolled for degrees were 962 enrolled for higher degree courses: Australian National University, 189; Sydney, 140; University of New South Wales, 208; New England, 25; Newcastle, 11; Macquarie, 8; Melbourne, 49; Monash, 116; Queensland, 68; Adelaide, 40; Flinders, 26; Western Australia, 39; and Tasmania, 43.

UNIVERSITIES: NEW STUDENTS ENROLLED, AUSTRALIA, 1962 TO 1966

Year	Degree courses		Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
	Higher degrees	Bachelor degrees	Post-graduate	Sub-graduate			
1962	475	14,487	279	r849	r470	r1,211	17,626
1963	538	15,717	387	r855	r247	r1,038	18,746
1964	603	18,339	462	r885	r178	r1,184	21,528
1965	697	20,062	458	r922	r96	r1,383	23,436
1966	962	22,185	607	490	63	1,395	25,520

(a) Includes *ad hoc* courses. (b) Adjustment made for students enrolled for more than one course.

Full-time, part-time and external university students

The following tables classify students at universities in 1966 and earlier years according to whether they were studying full-time, part-time or externally.

UNIVERSITIES: FULL-TIME, PART-TIME AND EXTERNAL STUDENTS, 1966

University	Full-time	Part-time	External	Total
Australian National	1,859	1,311	..	3,170
Sydney	12,905	3,755	..	16,660
New South Wales	6,976	6,077	232	13,285
New England	1,380	173	2,716	4,269
Newcastle	967	1,046	..	2,013
Macquarie	5	3	..	8
Melbourne	9,385	3,975	543	13,903
Monash	4,851	1,083	..	5,934
Queensland	6,814	5,293	2,714	14,821
Adelaide	5,659	2,900	388	8,947
Flinders	386	31	..	417
Western Australia	3,362	1,814	323	5,499
Tasmania	1,488	622	236	2,346
Total	56,037	28,083	7,152	91,272

UNIVERSITIES: FULL-TIME, PART-TIME AND EXTERNAL STUDENTS, AUSTRALIA, 1962 TO 1966

Year	Full-time	Part-time	External	Total
1962 . . .	r34,820	r22,333	6,164	63,317
1963 . . .	r39,029	r23,654	6,391	69,074
1964 . . .	r44,426	r25,217	6,545	76,188
1965 . . .	49,916	26,492	6,912	83,320
1966 . . .	56,037	28,083	7,152	91,272

Assistance to university students

The Commonwealth Government, through the Commonwealth Scholarships Board, grants undergraduate and post-graduate scholarships to university students. (Details of the Commonwealth Scholarship Scheme are given on page 623.) Commonwealth, State and local governments also award cadetships and other assistance to their employees. Foreign students are assisted by the Commonwealth Government under arrangements such as the Colombo Plan. The Universities themselves grant exhibitions and scholarships as well as special assistance to teachers, etc.

The following tables give details of students assisted at universities in 1966 and earlier years.

UNIVERSITIES: ASSISTED STUDENTS, 1966

University	Source of assistance					Type of course	
	Commonwealth Government	State Governments	Universities	Other	Adjusted total (a)	Higher degrees	Other
Australian National	782	1	1,075	56	1,720	499	1,221
Sydney . . .	6,016	3,034	3,773	117	9,459	563	8,896
New South Wales .	2,368	985	1,821	871	5,085	546	4,539
New England . . .	431	621	1,688	60	2,787	162	2,625
Newcastle . . .	323	397	650	142	1,096	60	1,036
Macquarie . . .	5				5	5	
Melbourne . . .	5,093	2,586	3,647	166	9,191	620	8,571
Monash . . .	1,638	1,801	327	88	3,846	330	3,516
Queensland . . .	3,595	832	549	304	5,280	460	4,820
Adelaide . . .	2,201	2,356	1,529	140	5,745	449	5,296
Flinders . . .	129	181	19	6	317	24	293
Western Australia .	1,498	814	107	147	2,490	164	2,326
Tasmania . . .	532	560	113	64	1,154	56	1,098
Total . . .	24,611	14,168	15,298	2,161	48,175	3,938	44,237

(a) Adjustment made for students assisted from more than one source.

UNIVERSITIES: ASSISTED STUDENTS, AUSTRALIA, 1962 TO 1966

Form of assistance	1962	1963	1964	1965	1966
Government assistance . . .	23,020	26,670	31,035	34,221	38,779
University assistance . . .	10,710	12,063	13,765	14,875	15,298
Other assistance . . .	1,553	1,620	1,771	1,904	2,161
Adjusted total(a) . . .	31,041	33,678	39,416	43,406	48,175

(a) Adjustment made for students assisted from more than one source.

Resident university students

In 1966, 7,720 full-time and 225 part-time students were in residence at affiliated colleges, halls of residence and university hostels. The 7,945 students in residence were distributed as follows: Australian National University, 815; Sydney, 984; New South Wales, 428; New England, 1,152; Melbourne, 1,593; Monash, 331; Queensland, 1,378; Adelaide, 382; Flinders, 24; Western Australia, 570; and Tasmania, 288. There were 5,831 male students and 2,114 female students in residence.

University degrees conferred, etc.

The following table shows the numbers of degrees conferred and diplomas and certificates granted for males and females separately at each university during the year ended 31 July 1966.

UNIVERSITIES: DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES GRANTED, YEAR ENDED 31 JULY 1966

Course	Aus- tralian National		Sydney		New South Wales		New England		New- castle		Mel- bourne	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Degrees—												
Arts	67	69	363	501	35	55	160	79	33	33	265	286
Divinity . . . . .	..	..	4	..	..	..	..	..	..	..	..	..
Psychology . . . . .	..	..	..	..	3	1	..	..	..	..	..	..
Social studies	12	1	..	..	..	..	..	..	..	..	..	..
Education . . . . .	..	..	25	9	..	..	..	..	..	..	67	7
Music . . . . .	..	..	1	1	..	..	..	..	..	..	7	20
Law	12	1	126	14	..	..	..	..	..	..	159	24
Commerce/Economics	40	1	149	14	137	4	..	..	15	1	223	35
Medicine/Surgery	11	2	279	55	2	..	..	..	..	..	148	25
Optometry . . . . .	..	..	..	..	6	..	..	..	..	..	..	..
Pharmacy . . . . .	..	..	91	77	..	..	..	..	..	..	..	..
Physiotherapy . . . . .	..	..	..	..	..	..	..	..	..	..	..	..
Dentistry . . . . .	..	..	27	2	..	..	..	..	..	..	32	..
Science	62	10	306	141	302	42	88	23	31	5	331	76
Applied science . . . . .	..	..	..	..	30	..	..	..	3	..	23	4
Engineering . . . . .	..	..	206	..	325	1	..	..	17	..	172	2
Surveying . . . . .	..	..	..	..	17	..	..	..	..	..	4	..
Architecture and town planning . . . . .	..	..	34	4	70	2	..	..	..	..	75	10
Building . . . . .	..	..	9	..	11	..	..	..	..	..	1	..
Agriculture . . . . .	..	..	46	11	..	..	20	..	..	..	36	2
Agricultural economics	..	..	..	..	..	..	20	..	..	..	..	..
Forestry	29	..	..	..	..	..	..	..	..	..	7	..
Veterinary science . . . . .	..	..	51	2	..	..	..	..	..	..	1	..
<i>Total degrees</i>	<i>233</i>	<i>84</i>	<i>1,717</i>	<i>831</i>	<i>938</i>	<i>105</i>	<i>288</i>	<i>102</i>	<i>99</i>	<i>39</i>	<i>1,551</i>	<i>491</i>
Post-graduate diplomas—												
Education . . . . .	..	..	163	267	..	..	53	64	23	23	61	43
Engineering . . . . .	..	..	24	3	49	3	..	..	..	..	11	..
Medicine . . . . .	..	..	11	3	..	..	..	..	..	..	21	1
Agriculture . . . . .	..	..	1	..	..	..	..	..	..	..	..	..
Other . . . . .	..	..	(a) 8	..	b 15	b 40	..	..	..	..	..	(c) 1
<i>Total post-graduate diplomas</i>	<i>..</i>	<i>..</i>	<i>207</i>	<i>273</i>	<i>64</i>	<i>43</i>	<i>53</i>	<i>64</i>	<i>23</i>	<i>23</i>	<i>93</i>	<i>45</i>
Sub-graduate diplomas . . . . .	..	..	2	32	6	2	..	..	..	..	17	60
Certificates . . . . .	..	..	..	..	44	2	..	..	..	..	..	..

(a) Anthropology, 3, Jurisprudence, 5. (b) Librarianship. (c) Criminology.

Table continued on next page.

UNIVERSITIES: DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES GRANTED, YEAR ENDED 31 JULY 1966—*continued*

Course	Monash		Queensland		Adelaide		Western Australia		Tasmania		All Universities	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Degrees—												
Arts	81	104	125	132	150	127	118	99	67	57	1,464	1,542
Divinity . . . . .	..	..	1	..	..	..	..	..	..	..	5	..
Psychology . . . . .	..	..	3	..	..	..	7	4	..	..	13	5
Social studies . . . . .	..	..	3	11	..	..	..	..	..	..	15	12
Education . . . . .	..	..	59	13	..	..	40	6	..	..	191	35
Music . . . . .	..	..	..	..	5	3	2	..	..	..	15	24
Law . . . . .	..	..	20	3	32	10	24	2	10	3	383	57
Commerce/Economics	55	7	106	9	49	2	57	3	19	3	850	79
Medicine/Surgery	5	..	115	12	78	16	35	4	..	..	673	114
Optometry . . . . .	..	..	..	..	..	..	..	..	..	..	6	..
Pharmacy . . . . .	..	..	29	33	..	..	..	..	..	..	120	110
Physiotherapy . . . . .	..	..	..	10	..	..	..	..	..	..	..	10
Dentistry . . . . .	..	..	18	..	15	1	11	..	..	..	103	3
Science	40	5	178	65	273	54	132	24	72	12	1,815	457
Applied science . . . . .	..	..	11	..	11	..	..	..	..	..	78	4
Engineering	19	..	117	2	123	..	39	..	13	2	1,031	7
Surveying . . . . .	..	..	4	..	..	..	..	..	..	..	25	..
Architecture and town planning . . . . .	..	..	14	..	15	1	..	..	..	..	208	17
Building . . . . .	..	..	..	..	..	..	..	..	..	..	21	..
Agriculture . . . . .	..	..	30	1	34	..	24	2	1	..	191	16
Agricultural economics . . . . .	..	..	..	..	..	..	..	..	..	..	20	..
Forestry . . . . .	..	..	1	..	..	..	4	..	..	..	41	..
Veterinary science . . . . .	..	..	55	2	..	..	..	..	..	..	107	4
<i>Total degrees.</i>	200	116	889	293	785	214	493	144	182	77	7,375	2,496
Post-graduate diplomas—												
Education	63	42	30	31	85	41	55	24	17	15	550	550
Engineering . . . . .	..	..	1	..	1	..	1	..	..	..	87	6
Medicine . . . . .	..	..	2	1	..	..	..	1	..	..	34	6
Agriculture . . . . .	..	..	6	..	..	..	..	..	..	..	7	..
Other . . . . .	..	..	..	..	..	..	..	..	..	..	23	41
<i>Total post-graduate diplomas</i>	63	42	39	32	86	41	56	25	17	15	701	603
Sub-graduate diplomas . . . . .	..	..	29	59	143	147	..	..	2	..	199	300
Certificates . . . . .	..	..	219	47	..	..	..	..	6	13	269	62

Table continued from previous page.

The next table shows total degrees conferred at all Australian universities during each of the years 1962 to 1966.

UNIVERSITIES: DEGREES CONFERRED, AUSTRALIA, 1962 TO 1966

Degree	1962			1963			1964			1965			1966		
	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.
Arts	890	733	1,623	936	946	1,882	1,102	1,107	2,209	r1,231	r1,249	r2,480	1,464	1,542	3,006
Divinity	3	1	3	1	1	1	3	3	3	2	2	2	5	5	3
Psychology	8	5	9	12	1	13	4	1	5	13	4	17	13	5	18
Social studies	97	19	116	103	20	123	114	29	143	113	36	149	191	35	226
Education	9	17	26	8	25	33	13	19	32	12	26	38	15	24	39
Music	310	30	340	260	39	299	297	43	340	367	41	408	383	57	440
Law	552	49	601	545	59	604	692	59	751	r702	56	r758	850	79	929
Commerce/ Economics	466	84	550	538	74	612	572	83	655	605	99	704	673	114	787
Medicine/Surgery . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Optometry . . . . .	..	..	..	53	39	92	76	52	128	119	71	190	120	110	230
Pharmacy . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Physiotherapy . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dentistry	139	16	155	141	3	144	143	17	160	139	6	145	103	9	106
Science	r1,034	276	r1,310	r1,217	320	r1,537	1,346	357	1,703	r1,563	r415	r1,978	1,815	457	2,272
Applied science	12	..	12	r37	..	r37	..	..	36	r53	..	r56	78	4	82
Engineering	r784	..	r784	r828	..	r829	912	..	912	r969	..	r972	1,031	7	1,038
Surveying	11	..	11	15	..	15	14	..	14	25	..	25	..	..	25
Architecture and town planning	79	5	84	133	8	141	128	13	141	r156	15	r171	208	17	225
Building	2	..	2	6	..	6	6	..	6	15	..	15	21	..	21
Agriculture and agri- cultural economics	168	12	180	191	17	208	189	16	205	219	31	250	211	16	227
Forestry	16	..	16	27	..	27	30	..	30	37	..	37	41	..	41
Veterinary science	65	4	69	79	4	83	90	7	97	116	4	120	107	4	111
Total—															
Higher doctorates	35	1	36	32	1	33	32	2	34	36	1	37	44	3	47
Ph.D.'s	124	14	138	161	13	174	188	15	203	r251	25	r276	312	24	336
Master's degrees	301	31	332	319	47	366	342	45	387	r394	81	r475	489	76	563
Bachelor's degrees	4,185	1,206	5,391	4,625	1,506	6,131	5,209	1,751	6,960	r5,795	r1,959	r7,754	6,530	2,393	8,923
Grand total	4,645	1,252	5,897	5,137	1,567	6,704	5,771	1,813	7,584	r6,476	r2,066	r8,542	7,375	2,496	9,871

University finance

Australian universities are incorporated by statute. Since their establishment they have come to depend greatly on government grants for their income. In recent years large amounts have been required for new buildings, as well as for current expenditure to provide staff and equipment to cope with increased student enrolments. In 1965 income from other than State and Commonwealth grants, including student fees, amounted to just over one-fifth of the total income. Income from non-government sources includes grants, mainly for research purposes, from businesses, international foundations and private individuals. Some income is also received from endowments.

Financial assistance to universities from the Commonwealth Government

Prior to 1939 Commonwealth assistance was almost entirely concerned with research projects carried out by or in collaboration with the universities. During and since the 1939-45 War the Commonwealth extended assistance to university students, at first to increase the number of highly trained people required for the war effort, then with the object of rehabilitating ex-service men, and finally as a social service benefit to the community. For the purpose of reconstruction training the Commonwealth Government made available to the universities approximately \$2 million for buildings and \$1 million for equipment.

Following a report submitted by a committee of inquiry appointed to report on university finances and requirements, the Commonwealth, since 1951, has made matched grants to the States for recurrent expenditure on university purposes and unmatched grants for university halls of residence and affiliated residential colleges. Since 1958 the Commonwealth has also assisted with the capital needs of the universities for building projects and for equipment, and grants for the building programmes of residential colleges affiliated with universities, including university halls of residence. In the 1961-63 triennium the Commonwealth matched State grants for buildings at teaching hospitals and in 1960 instituted grants for research at universities. As well as making grants available for State universities, the Commonwealth has continued to support the university institutions for which it is responsible.

In 1959, following the Report of the Committee on Australian Universities, the Commonwealth Government established the Australian Universities Commission under the *Australian Universities Commission Act 1959*. The Commission's principal functions are to advise the Prime Minister on financial assistance to Commonwealth universities and to States in relation to their universities and also on the balanced development of Australian universities. The Commission

commenced its work in July 1959. Since its establishment the Commission has produced three reports; the first, presented in October 1960 and covering the years 1961 to 1963, recommended Commonwealth grants totalling \$86 million for State universities. The Commission later recommended a Commonwealth grant of \$4 million for teaching hospitals. *The States Grants (Universities) Act 1960-1964* gave effect to the financial recommendations contained in the Commission's first report and subsequent recommendations for 1961-63. The Commission's second report was presented in August 1963, and recommended Commonwealth grants totalling more than \$121 million for State universities, subsequently increased by \$3.4 million for teaching hospitals, for the period 1964 to 1966. The *Universities (Financial Assistance) Act 1963-1966* gave effect to the financial recommendations contained in the Commission's second report and subsequent recommendations for 1964-66. In August 1966 the third report was presented. It recommended Commonwealth grants to the State universities of almost \$200 million for the period 1967-69, including almost \$6 million for teaching hospitals. The Commonwealth Government's grant, including \$5.7 million for teaching hospitals, was fixed at \$174 million. The Act giving effect to these grants is the *Universities (Financial Assistance) Act 1966*.

Commonwealth grant for recurrent expenditure in universities. This is a continuation of matched grants provided since 1951. The maximum amounts available in 1964 to 1969 are shown in the following table. These amounts have been adjusted to allow for the recommendations of the Report of the Inquiry into Academic Salaries by Mr Justice Eggleston in 1964.

**STATE UNIVERSITIES, ETC.: COMMONWEALTH GRANTS FOR
RECURRENT EXPENDITURE, 1964 TO 1969**
('\$000)

University, etc.	1964	1965	1966	1967	1968	1969
Sydney	4,640	5,154	5,676	5,944	6,273	6,608
New South Wales(a)	4,450	4,352	4,832	5,088	5,377	5,789
New England	1,364	1,454	1,550	1,624	1,712	1,806
Newcastle . . . . .	..	618	704	778	870	956
Macquarie . . . . .	..	112	224	549	978	1,401
Melbourne	3,868	4,298	4,796	5,074	5,319	5,572
Monash	2,072	2,770	3,358	3,881	4,309	4,687
La Trobe . . . . .	..	106	218	535	868	1,196
Queensland	2,808	3,238	3,644	4,006	4,362	4,708
Townsville	160	192	278	365	456	565
Adelaide	2,470	2,648	2,828	2,944	3,069	3,152
Flinders	112	208	418	709	828	947
Western Australia	1,794	1,974	2,166	2,316	2,481	2,660
Tasmania	744	844	942	1,033	1,128	1,233
South Australian Institute of Technology	230	258	290	(b)	(b)	(b)
Total	24,712	28,226	31,924	34,846	38,030	41,280

(a) Includes grants for the university colleges at Wollongong and Broken Hill and, for 1964, the University College of Newcastle which became the University of Newcastle as from 1 January 1965. (b) In 1967-69 Commonwealth grants will be made through the Commonwealth Advisory Committee on Advanced Education.

Since 1961 matched grants have been made on a basis of \$1 by the Commonwealth for every \$1.85 of income received by a university from fees and State grants. From 1951 to 1960 the ratio was, in general, \$1 to \$3.

Commonwealth grants for the teaching and administrative costs of halls of residence and residential colleges. From 1964 the grants consist of unmatched Commonwealth payments each year of \$5,000 (previously \$4,000) to each college affiliated with or administered by a university, plus the sum of \$30 for each resident student, and a further \$10 for each non-resident student receiving tutorial assistance. The total Commonwealth grant paid in 1966 was \$512,390. In the period 1967 to 1969 the basic grant for affiliated residential colleges will be varied according to the size of the colleges. Colleges with fewer than 100 students will continue to receive \$5,000 per annum, while colleges enrolling 100, 120, 140, 160 and 180 students will receive extra grants in increments of \$500 up to a maximum grant of \$7,500 for a college of 180 or more students. For university halls of residence a Commonwealth grant of \$5,000 per annum is payable without variation for the number of students.

Commonwealth grants for recurrent expenditure in university teaching hospitals. Since 1965 the Commonwealth Government has supported recurrent expenditure at teaching hospitals affiliated with universities. During 1966 the Commission held discussions concerning capital and recurrent grants for the 1967-69 triennium with the eight universities having medical schools.

The Commonwealth Government's support for recurrent grants in 1967 to 1969 relates to three items of expenditure. These are maintenance and service costs incurred on behalf of clinical students, administrative costs involved in clinical teaching, and books for students at libraries of teaching hospitals. The table below sets out the Commonwealth recurrent grants for teaching hospitals for 1965 and 1966 and those approved for each year of the 1967-69 triennium.

**STATE UNIVERSITIES: MAXIMUM COMMONWEALTH GRANTS FOR
RECURRENT EXPENDITURE AT TEACHING HOSPITALS, 1965 TO 1969**
(£)

University	1965	1966	1967	1968	1969
Sydney	38,600	74,000	} 100,141	102,646	105,979
New South Wales	7,800	19,000			
Melbourne	26,200	54,400	51,228	52,912	53,860
Monash	9,400	22,000	27,579	31,298	33,404
Queensland	15,200	31,600	37,544	39,509	40,141
Adelaide	13,600	27,600	20,505	20,315	20,315
Western Australia	9,600	19,400	18,758	19,305	19,557
Tasmania . . . . .	..	1,400	4,211	4,617	6,196
Total	120,400	249,400	259,966	270,602	279,452

The basis of these grants is \$1 from the Commonwealth for every \$1.85 of income received by a university from fees and State grants for these purposes.

Commonwealth grants for building projects in universities. These grants, for the period 1967 to 1969, are shown in detail in the Second Schedule to the *Universities (Financial Assistance) Act 1966*. Payments are made up to a given maximum for each project, on the basis of \$1 from the Commonwealth for every \$1 of State grants. Since 1964 the grant, where appropriate, has included an allowance for furnishings and equipment. Previously, separate grants were provided for these items. Also, since 1964 the schedule showing grants for university building projects includes grants for university computing facilities, but grants for the erection and alteration of buildings for halls of residence administered by universities are shown elsewhere. The total Commonwealth grant under this heading for each University is shown in the following table.

**STATE UNIVERSITIES: MAXIMUM
COMMONWEALTH GRANTS FOR BUILDING
PROJECTS, ETC , 1964 TO 1969**
(£'000)

University	1964-66	1967-69
Sydney	4,679	4,049
New South Wales	3,800	3,799
Wollongong	79	506
New England	1,353	1,300
Newcastle	1,020	1,800
Macquarie	2,100	3,905
Melbourne	4,813	4,080
Monash	4,470	4,830
La Trobe	1,410	5,838
Queensland	2 737	3,280
Townsville	380	1,768
Nathan	100	100
Adelaide	832	1,484
Flinders	2,835	2,161
Western Australia	1,921	2,000
Tasmania	936	1,008
Total	33,465	41,908

Commonwealth grants for buildings for halls of residence and affiliated residential colleges. The *States Grants (Universities) Act 1963* shows the grant available to each university for both types of student residence in the Fourth Schedule. Previously, grants for buildings for university-administered halls of residence were included in the Schedule showing university building projects. Payments were made up to a given maximum for each project. For halls of residence the grant comprised \$1 from the Commonwealth for every \$1 of State grants. For affiliated residential colleges Commonwealth grants were up to half of the cost of a project, the other half being met from college or State government sources. For the 1964-66 triennium, however, payments were made up to a given maximum for each project on the basis of \$1 from the Commonwealth for every \$1 of residential college funds and State grants. This basis is to be continued for the 1967-69 triennium. The maximum Commonwealth grants available for each State university in this triennium are shown in the following table.

**STATE UNIVERSITIES; MAXIMUM
COMMONWEALTH GRANTS FOR BUILDINGS
FOR HALLS OF RESIDENCE AND AFFILIATED
RESIDENTIAL COLLEGES, 1964 TO 1969**

(\$)

University	1964-66	1967-69
Sydney	773,250	528,000
New South Wales	687,000	1,026,000
New England	898,500	1,134,000
Melbourne	1,014,500	1,062,000
Monash	1,110,000	1,566,000
La Trobe	440,000	586,000
Queensland	648,550	926,000
Townsville	400,000	919,000
Adelaide	309,200	430,000
Flinders	35,000	..
Western Australia	756,500	374,000
Tasmania	262,500	401,000
Total	7,335,000	8,952,000

Commonwealth grants for building projects in teaching hospitals. Since 1961 the Commonwealth Government has supported building grants recommended by the Commission for teaching hospitals. The total Commonwealth grants under this heading for 1961-63, 1964-66 and those approved for 1967-69 are shown in the following table. Payments are made on the basis of \$1 from the Commonwealth for every \$1 of income received by universities from fees and State grants for this purpose. Where appropriate the grants include an allowance for furnishings and equipment.

**STATE UNIVERSITIES; MAXIMUM COMMONWEALTH
GRANTS FOR BUILDING PROJECTS, ETC. AT
TEACHING HOSPITALS, 1961 TO 1969**

(\$)

University	1961-63	1964-66	1967-69
Sydney	746,370	582,700	} 900,000
New South Wales	588,920	179,500	
Melbourne	685,475	617,500	1,417,000
Monash	832,195	384,600	673,300
Queensland	565,310	525,150	269,300
Adelaide	216,510	640,400	92,500
Western Australia	65,106	63,350	795,000
Tasmania . . . . .	..	118,500	780,000
Total	3,699,886	3,111,700	4,927,100

Commonwealth grants for special research projects in universities. A Commonwealth grant of \$1 million was made in the 1961-63 triennium for research equipment on the basis of \$1 from the Commonwealth for every \$1 of State grants. For the 1964-66 triennium the Australian Universities Commission recommended a Commonwealth grant for special research purposes of \$5 million for the State universities on the basis of \$1 from the Commonwealth for every \$1 of State grants. Of this amount a Commonwealth grant of \$3 million was allocated by the Commission in agreement with State governments. The remaining \$2 million was allocated by the Australian Research Grants Committee (see page 651) to individuals or research teams whether inside or outside universities. The maximum Commonwealth grant available to each university in the 1967-69 triennium is shown in the following table. The amount of these grants that will be paid by the Commonwealth will depend on agreement between the Commonwealth and States.

**STATE UNIVERSITIES; MAXIMUM
COMMONWEALTH GRANTS FOR SPECIAL
RESEARCH PURPOSES ALLOCATED BY
AUSTRALIAN UNIVERSITIES COMMISSION
1964 TO 1969**

(\$'000)

University	1964-66	1967-69
Sydney	625	564
New South Wales	395	360
New England	120	114
Newcastle	33	42
Macquarie . . . . .	..	18
Melbourne	625	540
Monash	175	270
La Trobe . . . . .	..	18
Queensland	275	264
Townsville	12	36
Adelaide	330	294
Flinders	40	36
Western Australia	245	234
Tasmania	125	90
Total	3,000	2,880

University income and expenditure

The following tables show particulars of the income and expenditure of each university in 1965 and the totals for 1961 to 1965.

UNIVERSITIES: INCOME, 1965

(\$'000)

University	Government grants(a)		Other income			Total income
	Cwth Government grants	State Government grants	Donations and endowments(b)	Student fees(c)	Other income	
INCOME FOR SPECIFIC CAPITAL PURPOSES(d)						
Australian National	5,378	..	..	..	193	5,571
Sydney	1,028	1,651	416	..	..	3,096
New South wales	2,096	1,289	391	..	..	3,776
New England	574	914	32	..	45	1,565
Newcastle	800	1,006	..	..	..	1,806
Macquarie	184	3,229	..	..	..	3,413
Melbourne	1,214	784	169	..	..	2,168
Monash	2,148	2,148	443	..	..	4,739
La Trobe	376	181	..	..	..	557
Queensland	1,277	2,658	139	..	..	4,074
Adelaide	185	185	..	..	..	370
Flinders	1,755	1,755	..	..	35	3,545
Western Australia	909	909	..	..	..	1,818
Tasmania	217	217	..	..	..	434
<i>Total</i>	<i>18,142</i>	<i>16,926</i>	<i>1,592</i>	<i>..</i>	<i>273</i>	<i>36,932</i>

INCOME FOR OTHER PURPOSES

Australian National	12,404	..	425	285	942	14,056
Sydney	6,508	6,617	2,132	3,142	904	19,302
New South Wales	5,166	6,354	596	1,957	772	14,845
New England	1,839	2,293	106	422	720	5,380
Newcastle	655	939	96	216	13	1,919
Macquarie	112	208	1	..	31	352
Melbourne	5,791	5,726	901	3,141	1,191	16,751
Monash	2,923	4,380	312	1,025	233	8,873
La Trobe	106	194	..	..	..	300
Queensland	3,883	4,543	1,633	2,299	389	12,748
Adelaide	3,318	3,953	447	1,160	639	9,517
Flinders	208	382	6	..	..	596
Western Australia	2,504	3,201	491	849	648	7,693
Tasmania	997	1,277	118	374	168	2,935
<i>Total</i>	<i>46,415</i>	<i>40,067</i>	<i>7,263</i>	<i>14,869</i>	<i>6,652</i>	<i>115,266</i>

For footnotes see next page.

UNIVERSITIES: INCOME, 1965—*continued*
 (\$'000)

University	Government grants(a)		Other income			Total income
	Cwlth Government grants	State Government grants	Donations and endowments(b)	Student fees(c)	Other income	
TOTAL INCOME						
Australian National	17,782	..	425	285	1,135	19,627
Sydney	7,536	8,268	2,549	3,142	904	22,398
New South Wales	7,262	7,642	987	1,957	772	18,621
New England	2,413	3,207	138	422	765	6,945
Newcastle	1,455	1,945	96	216	13	3,725
Macquarie	296	3,437	1	..	31	3,765
Melbourne	7,005	6,511	1,070	3,141	1,191	18,918
Monash	5,071	6,528	755	1,025	233	13,612
La Trobe	482	375	..	..	..	857
Queensland	5,161	7,201	1,772	2,299	389	16,822
Adelaide	3,503	4,138	447	1,160	639	9,887
Flinders	1,963	2,137	6	..	35	4,141
Western Australia	3,413	4,110	491	849	648	9,511
Tasmania	1,215	1,494	118	374	168	3,369
Total	64,556	56,993	8,855	14,869	6,925	152,198

(a) Includes funds expended by various government departments and other bodies in respect of universities but not controlled by the universities. (b) In the case of endowments, only income from property and other investment of these endowments is included. The treatment of donations depends on the terms of the gift, etc. When the capital sum is specified to be expended over several years, only the portion of the capital sum allocated to each year is shown as income in that year, but if the capital sum is available for spending without limitation as to time, the full amount is recorded as income in the year it is received, irrespective of whether it is spent in that year or not. The capital value of land and buildings donated to the universities is not recorded as income, unless these properties are sold, in which case the amounts realised are included. (c) Excludes fees collected on behalf of student unions. (d) Income received specifically for new buildings, major alterations and additions to buildings, installation of services, purchase of land and buildings and major equipment.

 UNIVERSITIES: EXPENDITURE, 1965
 (\$'000)

University	Teaching and research	Administration and general overhead	Libraries	Buildings, premises, grounds	Sundry auxiliary expenditure	Total expenditure
Australian National	10,096	1,485	610	5,469	1,006	18,666
Sydney	14,351	1,624	812	3,420	418	20,624
New South Wales	10,696	1,318	628	6,799	923	20,365
New England	2,817	642	231	1,872	999	6,561
Newcastle	1,393	197	155	1,677	35	3,458
Macquarie	9	166	117	3,541	..	3,832
Melbourne	12,579	1,169	762	3,449	1,016	18,975
Monash	6,008	925	573	4,867	321	12,693
La Trobe . . . . .	..	88	206	242	..	536
Queensland	10,192	876	549	5,087	276	16,980
Adelaide	7,070	679	466	1,102	525	9,843
Flinders	347	91	200	3,744	2	4,384
Western Australia	5,545	570	350	2,038	753	9,257
Tasmania	2,173	329	171	668	185	3,526
Total	83,276	10,159	5,830	43,976	6,459	149,701

UNIVERSITIES: INCOME AND EXPENDITURE, 1961 TO 1965

(\$'000)

University	1961	1962	1963	1964	1965
Australian National—					
Income	11,328	11,181	12,991	16,609	19,627
Expenditure	10,106	12,251	r13,938	16,126	18,666
Sydney—					
Income	14,033	16,439	19,232	21,710	22,398
Expenditure	14,605	16,342	17,302	20,547	20,624
New South Wales—					
Income	14,141	15,623	16,295	19,105	18,621
Expenditure	14,905	15,801	15,247	17,278	20,365
New England—					
Income	3,846	4,167	5,533	6,358	6,945
Expenditure	4,086	4,675	4,887	6,154	6,561
Newcastle—					
Income . . . . .	..	..	..	..	3,725
Expenditure . . . . .	..	..	..	..	3,458
Macquarie—					
Income . . . . .	..	..	..	..	3,765
Expenditure . . . . .	..	..	..	..	3,832
Melbourne—					
Income	11,195	14,613	15,389	16,911	18,918
Expenditure	r12,132	15,270	r15,131	r16,908	18,975
Monash—					
Income	7,998	8,509	8,294	11,335	13,612
Expenditure	7,842	9,055	8,254	10,701	12,693
La Trobe—					
Income . . . . .	..	..	..	..	857
Expenditure . . . . .	..	..	..	..	536
Queensland—					
Income	8,361	9,889	10,441	12,812	16,822
Expenditure	8,322	8,727	9,985	12,727	16,980
Adelaide—					
Income	7,007	7,837	9,152	11,226	9,887
Expenditure	6,733	7,478	10,020	10,749	9,843
Flinders—					
Income . . . . .	..	..	..	(a)	4,141
Expenditure . . . . .	..	..	..	(a)	4,384
Western Australia—					
Income	4,807	6,045	7,414	7,352	9,511
Expenditure	5,127	5,707	7,566	7,672	9,257
Tasmania—					
Income	2,549	3,304	2,763	3,235	3,369
Expenditure	2,647	3,264	2,829	2,995	3,526
Total income	85,265	97,606	107,503	r126,652	152,198
Total expenditure	r86,505	r98,570	r105,160	r121,857	149,701

(a) Included with the University of Adelaide.

Other tertiary institutions

In addition to the degree-granting universities, various other institutions offer courses at tertiary level which may lead to a certificate, diploma or similar qualification. Included among these institutions are technical colleges, which have been described on pages 599–602.

Colleges of advanced education

In 1966 the Commonwealth Government, acting on the advice of the Commonwealth Advisory Committee on Advanced Education, agreed to assist the States in the establishment of colleges of advanced education. It is envisaged that they will provide mainly tertiary education and training with vocational emphasis, as distinct from the academic education provided by

the universities. In some States, colleges of advanced education will be developed from existing technological institutions. In the Australian Capital Territory and Tasmania, separate colleges of advanced education are being established.

Teachers colleges

The State Education Departments conduct teachers' colleges to train teachers for government schools. There are eight colleges in New South Wales, thirteen in Victoria, four in South Australia, three in Western Australia, and two each in Queensland and Tasmania, making a total of thirty-two colleges. These colleges provide a variety of teacher training courses, including those for primary teachers, secondary teachers, and those specialising in teaching infants, handicapped children, art, music, and handicrafts. A description of the courses is given on pages 594-5. Teachers colleges are co-educational and, in the larger States, have been established in country areas as well as in cities. Students entering them have completed their secondary schooling and are usually about seventeen years of age. The principal and staff of the colleges are responsible to the Director of Education in the State concerned.

Kindergarten training colleges

The Kindergarten Unions in all States except Tasmania have established teacher training colleges providing three-year courses. The minimum entrance age is usually seventeen years and at least the Leaving Certificate or its equivalent is required for admission. In addition, in New South Wales the Sydney Day Nursery and Nursery Schools' Association maintains a training college.

The pre-school teacher training courses in these colleges are all full-time diploma courses and are similar in content and standards. Teachers are trained for work with children between the ages of two and seven years, and the training courses include the study of general educational theory, the theory of pre-school education, general cultural subjects, and art and crafts (including music). In addition, training is given in practical pre-school teaching.

Agricultural colleges

There are seven State agricultural colleges—Hawkesbury and Wagga (New South Wales), Longerenong and Dookie (Victoria), Lawes (Queensland), Roseworthy (South Australia), and Muresk (Western Australia), offering a comprehensive course of two or three years leading to the award of a Diploma in Agriculture or in a specialised field such as animal husbandry, dairy manufactures or horticulture. The School of Horticulture, Burnley, Victoria, also offers a three-year diploma course.

Agricultural colleges are government institutions administered by the State Departments of Agriculture in New South Wales, Victoria, South Australia, and Western Australia, and by the State Department of Education in Queensland. Their purpose is to teach the principles and practices of agriculture and its specialised branches to those intending to take up farming as a career and to those who propose to enter such occupations as agricultural field officer or technical officer in food processing industries.

The minimum entrance standard is the penultimate major secondary examination of the State concerned, except in Western Australia where it is the sub-leaving examination. As entry is competitive, there is a tendency for students to hold better than the minimum qualifications. All the colleges are fully residential and the minimum age at which students may enter them varies from fifteen to seventeen years, depending on the college and the type of course.

In addition to their formal courses of training, agricultural colleges offer short courses of from three days to one month to farmers and teachers in country districts.

Schools of forestry

Since 1965 tertiary training in forestry, previously carried out by the Australian Forestry School, Canberra, has been provided by a Department of Forestry in the Faculty of Science within the Australian National University's School of General Studies. A four-year degree course is offered. Training in forestry is also carried out at the Creswick School of Forestry in Victoria.

Conservatoria of music

There are conservatoria of music in five States. Those in Victoria and South Australia are attached to the Universities of Melbourne and Adelaide respectively. The New South Wales State Conservatorium, the Queensland State Conservatorium and the Tasmanian Conservatorium are controlled by the respective Departments of Education. All five conservatoria offer diploma courses for entry to which matriculation status is not required; at Sydney, Melbourne, Adelaide, and Western Australia degree courses are also available to matriculated students.

The Canberra School of Music, established in July 1965, is administered by the Department of the Interior. In 1967 a three-year full-time diploma course consisting of both practical and theoretical studies is being offered for the first time.

Service and administrative colleges

Each of the three armed services maintains institutions for the training of officers. Descriptions of these can be found in the chapter Defence. The Royal Military College, Duntroon, Australian Capital Territory, has arrangements with universities whereby its graduates may enter university courses at an advanced stage. The Royal Air Force Academy, Point Cook, Victoria, has evolved from the Royal Australian Air Force College, which was established in 1948 as a tertiary training centre to provide a professional education for permanent officers of the Air Force. It is affiliated with the University of Melbourne and has adopted that University's Bachelor of Science course. The Academy is also permitted to present students for higher degrees in science and the degree of Doctor of Philosophy. Students may also proceed to the University of Sydney to take a degree in engineering.

The Australian School of Pacific Administration, controlled by the Department of Territories, trains students in the various aspects of service and administration in Commonwealth Territories, including teaching.

Australian Administrative Staff College

Opened in 1957, the Australian Administrative Staff College is a private organisation working in close co-operation with government and other public bodies, the armed services and the trade union movement. It was founded, and is owned, by a large group of leading Australian companies and has its permanent premises at Mount Eliza, near Melbourne. The College conducts residential courses for administrators to further the study of the problems which arise in managerial work.

Commonwealth activities in education

Fields of activity

Although education is primarily the responsibility of the States, the Commonwealth has instituted a number of measures of direct assistance to educational institutions and to students. It is responsible for public education in its own Territories and is engaged in educational activities incidental to its responsibilities in such areas as defence, external relations, immigration and social services. Activities of the Commonwealth in education are not administered by a single authority but are divided among a number of departments and instrumentalities. Education in Commonwealth Territories is described in the chapter The Territories of Australia; various schools and colleges for the defence services are treated in the chapter Defence; and other activities which may be considered broadly as educational are described in the section on Broadcasting and Television and elsewhere in the chapter Transport, Communication and Travel.

Department of Education and Science

A new Commonwealth Department known as the Department of Education and Science was created in December 1966. The new Department, which has absorbed the former Education Division of the Prime Minister's Department including the Commonwealth Office of Education, is concerned with grants for educational purposes, e.g. for universities, colleges of advanced education, technical schools, and science buildings, as well as with the new grants for building teachers colleges. It is responsible for assistance to students for the scheme of Queen Elizabeth II Fellowships and for special scholarships offered by overseas countries for Australians. Among the Department's responsibilities are matters in the field of international relations in education, including Unesco and Commonwealth Co-operation in Education, and liaison with State and other education bodies throughout Australia. The Department provides professional advice on education to other Commonwealth departments and authorities. It administers grants to such bodies as the Academy of Science, the Humanities Research Council, the Social Sciences Research Council, and the Institute of Aboriginal Studies, and is responsible for grants for scientific research such as those recommended by the Australian Research Grants Committee.

The *Australian Universities Commission* and the *Commonwealth Advisory Committee on Advanced Education* are responsible to the Minister for Education and Science. The Minister is also responsible for the *Commonwealth Scientific and Industrial Research Organization*, the *National Standards Commission*, the *Australian National University*, and the *College of Advanced Education* to be established in Canberra. The Prime Minister's Department continues to be responsible for the National Library and for art, literature and other cultural activities in which the Commonwealth is interested.

Commonwealth Scholarships Board

This Board, under its former title of the Universities Commission, was established by the *Education Act* 1945. Prior to 1945 the Commission had functioned under wartime National Security Regulations. The Board consists of a chairman, who is the Director of the Office of Education, and three other members. The main responsibilities of the Board at present are advising the Government on the policy and administration of Commonwealth university and advanced education scholarships and Commonwealth post-graduate awards. The Board

is responsible for arranging and supervising the training of ex-service personnel and war widows at university and university type institutions under the Korea and Malaya Training Scheme and the Disabled Members' and Widows' Training Scheme. It was also responsible for arranging and supervising training under the Commonwealth Reconstruction Training Scheme until its completion at the end of 1961.

Advisory bodies

The Commonwealth Government has established various advisory bodies whose fields of concern relate to matters of education. Already mentioned (pages 613–14) is the Australian Universities Commission, which advises the Commonwealth Government on university development. The Commonwealth Advisory Committee on Advanced Education advises the Minister on the balanced development of tertiary education outside universities. Within financial limits nominated by the Minister, the Committee recommends grants to the States for colleges of advanced education and directs grants to any such colleges established by the Commonwealth. The Australian Research Grants Committee advises the Minister on the merit of applications for research grants from individuals and research teams, and suggests the allocation of funds. The Queen Elizabeth II Fellowships Committee advises the Minister on the merit of applicants for these Fellowships, which are awarded for post-doctoral study in the physical and biological sciences, and advises generally on the administration of this scheme of Fellowships.

The Commonwealth Government appointed in 1965 a committee of inquiry into the need for a college of advanced education in the Australian Capital Territory. The committee's report was presented to Parliament in October 1966 and the Government accepted its recommendation that a college—to be known as the Canberra College of Advanced Education—should be established.

The report of the Advisory Committee on Educational Television appointed in 1964 by the Australian Broadcasting Commission was tabled in Parliament in May 1966.

Assistance to students

The Commonwealth Government provides financial assistance to students who are undergoing tertiary training through a number of scholarship schemes, all of which are administered by the Commonwealth Scholarships Board. The most extensive of these is the Commonwealth University Scholarship Scheme, under which 6,000 scholarships are offered annually to undergraduates at universities.

The majority of the undergraduate scholarships are open entrance awards allocated among the States on a population basis and awarded competitively on the results of examinations accepted for matriculation in each State. In addition, 2,000 later year awards are available to students who have completed one or more years of a course, and a small quota of mature age awards is reserved for persons not less than twenty-five years of age. The upper age limit of thirty, which up to 1967 was a condition of these awards, has been removed. All successful applicants have their fees paid. Scholarship holders may also be paid a living allowance subject to a means test. As from 1 January 1967 the maximum rates of allowance have been \$852.80 per annum for a scholar living away from home and \$559 per annum when living at home.

In addition to these awards the Commonwealth Government provides up to 1,000 scholarships each year for students taking approved courses of advanced education at institutions other than universities. Benefits are as for Commonwealth university scholarships.

In 1959 a scheme of Commonwealth post-graduate awards tenable at Australian universities was introduced, under which 100 awards were made available each year. The benefits comprise a living allowance without means test and payment of university fees. The possible number of post-graduate awards was increased to 225 from 1963, to 400 from 1965, and to 500 from 1967. The Commonwealth Government contribution towards the stipend in respect of each award was raised to \$1,800 per annum from 1 January 1964. Awards may be renewed annually up to a maximum period of four years.

The Commonwealth schemes of secondary and technical scholarships are referred to on page 598.

International relations

The Commonwealth has been actively involved in the considerable extension which has recently taken place in relations and exchanges with other countries in the field of education. A significant encouragement to this growth has been membership of Unesco, to which Australia has belonged since 1946 when the organisation was founded.

Twelve specialist Unesco committees in Australia are responsible for a wide and varied programme of activities. The Committees' projects include the organisation of Australian and regional seminars, information programmes, and the preparation and circulation of travelling

exhibitions which deal with subjects forming part of Unesco's programme. The Australian National Advisory Committee for Unesco co-ordinates the work of the specialist committees and advises the Commonwealth Government on Australian participation in Unesco.

With the co-operation of educational institutions, State Education Departments and other bodies, the Commonwealth has accepted increasing commitments in schemes of international assistance and co-operation. The Colombo Plan Technical Co-operation Scheme, the United Nations Expanded Programme of Technical Assistance, the Australian International Awards Scheme, the Australian South Pacific Technical Assistance Programme, and the Special Commonwealth African Assistance Plan are some of the programmes through which the Commonwealth Government is providing training for overseas students in Australia and is sending Australian experts and equipment to many of the newly developing countries, especially in Asia and Africa. Australia is also actively sharing with other Commonwealth countries in the scheme of Commonwealth Co-operation in Education which includes the Commonwealth Scholarship and Fellowship Plan. There were some 1,850 sponsored foreign students in Australian educational institutions at 30 June 1966, compared with about 800 in 1956. Over three-quarters of these were Colombo Plan trainees, most of whom were studying in various fields of engineering, science, medicine, education, and economics.

In 1964, by agreement between the United States and Australian Governments, the Australian-American Educational Foundation, financed jointly by the two Governments, was established to operate a scheme of educational exchanges between the United States and Australia. This new scheme has similar aims and purposes to the Fulbright Scheme which it replaces and which had operated wholly on American funds.

Support is given to Australian participation in many international governmental and non-governmental organisations. For example, Australian educationists have attended yearly meetings of the International Bureau of Education, and regular contributions are made to the Bureau's international surveys into various aspects of education. Assistance has been given to bodies such as the Australian Teachers' Federation in sending delegates to meetings of the World Confederation of Organisations of the Teaching Profession.

Grants for other educational purposes

The Commonwealth gives assistance to various educational schemes and institutions. Grants are made each year by the Commonwealth to the Australian Pre-school Association for the development of kindergarten education, to the Commonwealth National Fitness Council, to the Australian Council for Educational Research, to the Department of Adult Education at the University of Sydney for the publication of the *Current Affairs Bulletin*, and to assist in the provision of training in occupational therapy, physiotherapy and nursing.

Migrant education

The Commonwealth Government's post-war immigration policy has brought to Australia a large number of immigrants with little or no knowledge of English. To assist the assimilation of these newcomers into the Australian community, a system of migrant education has been developed to teach them English and to give them information about Australia. This service is provided free of charge to immigrants above school leaving age.

Before arriving in Australia settlers who do not speak English are given some instruction in English by shipboard education officers. Some may have attended classes in Europe organised by the Inter-governmental Committee for European Migration, with which the Australian Government co-operates. In Australia, evening classes are arranged by State Education Departments wherever nine or more migrants in country areas, or twelve or more migrants in city areas, wish to learn English. There is also available through State Education Departments a free correspondence course in English. In addition, English lessons are broadcast regularly by the Australian Broadcasting Commission. The Commonwealth Office of Education provides technical advice on all aspects of migrant education and is responsible for the preparation of teaching materials, while responsibility for the overall supervision of the programme rests with the Department of Immigration, which also meets the costs.

In November 1966, 12,000 migrants were enrolled in classes and 7,045 were enrolled in radio and correspondence courses. Since the inception of the programme in 1948 approximately 530,000 migrants have been enrolled for English tuition.

Technical training by government departments

Although most needs of departments for trained staff are met by apprenticeship schemes and other technical college courses and by the universities, some departments provide training which is not available elsewhere. The most important field for which such training is provided is the training of telephone, telegraph, radio, and television technicians by the Postmaster-General's Department.

Adult education

The term 'adult education' as used in Australia refers mainly to non-vocational educational and cultural activities for adults. While the nature of the recognised adult education authorities varies from State to State, their major activities have many common features. Regular courses of lectures are organised on such topics as literature, music, drama, international affairs, languages, and crafts. Some authorities also organise discussion groups, festivals and summer schools, and provide special services for groups in remote areas. In 1960 an Australian Association of Adult Education was formed, and its first annual conference was held in Adelaide in 1961. The Association handles matters pertaining to adult education at a national level and arranges liaison with similar bodies in other countries.

One of the first bodies active in the field of adult education in Australia was the Workers' Educational Association, which formed associations in all States in 1913. Its aims are to bring the universities into closer relationship with the community in general and to provide for higher education in civic and cultural subjects. These associations have been superseded by Adult Education Boards or Councils set up by the State Governments in Victoria, Queensland and Tasmania, and by the University in Western Australia. In the other two States, New South Wales and South Australia, the associations continue to co-operate with the universities in their extension work and are given direct grants by the Governments concerned.

There are throughout Australia various other organisations which are active in the field of adult education. The World Education Fellowship, for example (*see* page 628), has since its inception in Australia been interested in adult education.

The organisation of adult education and some of the activities in each State are described in the following pages.

New South Wales

The majority of State Government grants for adult education are allocated on the advice of the Adult Education Advisory Board. Grants are made to the University of Sydney (Department of Adult Education), the Workers' Educational Association, the University of New England (Department of University Extension), the University of New South Wales (Division of Post-graduate Studies), the Public Library of New South Wales (Adult Education Section), and the World Education Fellowship. The Arts Council of Australia (New South Wales Division) receives its grant direct from the State Government.

University of Sydney. The work of the Department of Adult Education is carried out under the supervision of two Senate committees, namely the University Extension Board and the Joint Committee for Tutorial Classes. A third committee, the Consultative Committee on Adult Education, is convened upon request to clarify questions of policy.

The University Extension Board provides two forms of education—the extension of existing university education to the public in the form of lectures, or to graduates in the form of refresher courses: and the extension of academic education beyond the existing university curriculum by special courses or classes in subjects not provided by university departments. The Joint Committee for Tutorial Classes works in conjunction with the Workers' Educational Association. Its activities include the provision of tutorial classes in a wide variety of subjects, discussion groups, and 'kits' to serve the needs of country districts and people who cannot be catered for by tutorial classes. It also publishes the fortnightly *Current Affairs Bulletin*.

University of New South Wales. The Division of Post-graduate Studies was formed in 1961 and is largely financed by the Council of the University. Its major concern is to provide university courses of an academic nature through correspondence, radio and television. In addition, however, extension courses in the humanities, languages and child development are offered.

University of New England. The Department of University Extension at the University of New England brings university extension activities especially to the people of northern New South Wales and conducts lectures, discussions, courses, radio talks, and classes in arts and social sciences in towns throughout this region. Short residential courses are held on topics of interest to primary producers in the area. Vacation schools attract participants from many other areas as well.

Workers' Educational Association. In addition to co-operating with the University of Sydney Department of Adult Education, the Workers' Educational Association itself provides classes in a wide variety of fields. It publishes *The Australian Highway*, a bi-monthly journal of adult education, and maintains a property near Sydney where short residential schools are held through the year. The Association also organises educational conferences and public lecture series at frequent intervals.

Public Library of New South Wales. The Public Library of New South Wales Adult Education section provides an adult education library service for all classes and groups conducted by the bodies mentioned above, with the exception of the University of New South Wales Division of Postgraduate and Extension Studies.

New South Wales Department of Education. The New South Wales Department of Education has established evening colleges consisting of classes held in school buildings and staffed largely by departmental teachers. Such colleges provide a wide range of educational, cultural and leisure activities for adolescents and adults, and at some there are facilities enabling adults to prepare for public examinations.

Arts Council of Australia. Adult education of a more informal kind is provided by the New South Wales Division of the Arts Council of Australia, which maintains a mobile theatre unit and organises touring ballet, opera and drama companies to country towns.

Victoria

The Council of Adult Education is a government instrumentality established by the *Adult Education Act* 1946. Its aims are to stimulate adult education in Victoria and to encourage voluntary organisations and associations by giving them advice and assistance. Its activities include a variety of classes, usually consisting of ten to twenty sessions, on topics ranging from social studies, psychology, language, and literature to crafts, music and drama. Four separate non-residential schools are held in the Melbourne area. The Council publishes a monthly newsletter *Group Affairs* and a quarterly journal *Adult Education*. Its group service assists and provides programme material for discussion groups formed by organisations and individuals throughout the State. An important development is the extension of the Council's activities, including classes and discussion groups, to the prisons, as part of a general plan for penal reform in Victoria. The Council's income is derived mainly from a government grant, but also from student fees and Community Arts Service performances.

The Adult Education Association is a financially self-supporting voluntary association. Groups, generally consisting of students of Council classes, are formed and organise their own programmes.

The University of Melbourne Extension Committee arranges free public lectures and organises classes for matriculation students on points of interest in their studies.

The Victorian Education Department arranges classes in commercial subjects, arts and crafts, and shorthand and typing. Evening classes in leaving and matriculation subjects are also offered. A recent innovation is the establishment of the Wangaratta Centre, where the financial responsibility for the running of activities is in the hands of a local committee.

The Y.W.C.A. runs courses in physical education, languages, crafts and manual skills.

Queensland

The Queensland Board of Adult Education was constituted in 1944 and is responsible under the Minister for Education for the provision of adult education facilities throughout the State. Under the executive officer of the Board are seven district officers, one based in Brisbane and six in large country towns, who are responsible for organising activities in country areas. The cost of the programme is borne by the State Government and admission to all courses is free. Activities include lectures, group meetings on a variety of topics, generally short-term, but some extending over a full year, and film screenings. Library and film services are provided. A Public Lecture Committee established by the University of Queensland is responsible for organising public lectures by local speakers and distinguished visitors to the university. Through the Institute of Modern Languages the university provides facilities for the study of modern languages by members of the general public.

The Queensland Division of the Arts Council of Australia sponsors and organises lectures, film screenings, exhibitions, drama festivals, and professional performances.

South Australia

Since 1917 the University of Adelaide, through the Joint Committee for Tutorial Classes, has provided in the metropolitan area a series of tutorial classes, lecture classes and study circles on a wide range of subjects of cultural and current interest, in co-operation with the Workers' Educational Association of South Australia. In 1957 a Department of Adult Education was established in the university and a full-time Director appointed. A wide range of university extension courses and educational conferences, summer schools and seminars, including a number dealing with subjects at post-graduate level, are organised directly by the university. The Workers' Educational Association of South Australia, in addition, carries on an independent educational programme of classes, schools, exhibitions, and film festivals.

The State Education Department also arranges an extensive programme of educational activities for adults. In addition to classes in academic and craft subjects, the Department's adult education centres offer a wide range of leisure interests and cultural subjects.

The Arts Council of Australia (South Australian Division) organises adult education activities in the liberal arts.

Western Australia

Adult education in Western Australia is organised by the Adult Education Board established in 1928 under the terms of the statutes of the University of Western Australia. The Board has a considerable degree of autonomy. Its executive officer is the Director of Adult Education. In the metropolitan area the Board conducts classes, refresher courses and short schools, conferences, seminars, and public lectures, and maintains a library. The Board's country work operates mainly through a box library scheme for discussion groups. Lecture tours and week-end schools are held, and local adult education is encouraged through local committees. Metropolitan work and country work are drawn together in an annual summer school. The Board also operates a community arts service and arranges screenings of foreign films. Regional drama festivals and music festivals are arranged, culminating in the annual Festival of Perth, inaugurated and administered by the Board.

Tasmania

Some form of adult education has existed since the formation in 1913 of a Workers' Educational Association, which worked in conjunction with the University of Tasmania for a number of years. The Association received a grant through the university, which had a Director of Tutorial Classes. Later, the grant was paid direct to the Association by the Government, and the university's tutorial department ceased to exist. The Adult Education Board, established under the *Adult Education Act* 1948, organises classes on a wide range of subjects. The Board sponsors special lectures, film screenings and art exhibitions, recitals of music, and dramatic performances in both city and country areas. Its income is derived from a State Government grant and from students' fees. The executive officer of the Board is the Director of Adult Education. Activities are organised on a regional basis by organisers based in Hobart, Launceston and three large country centres.

The Arts Council of Australia (Tasmanian Division), which works in close contact with the Adult Education Board, organises exhibitions, concerts and public performances.

Australian Capital Territory

The School of General Studies of the Australian National University has organised classes and discussion groups through its Adult Education Department since 1959. The Arts Council of Australia (A.C.T. Division) organises cultural activities of general community interest. The New South Wales Department of Education Evening College courses are offered at the Canberra High School Evening College.

Overseas students in Australian educational institutions

The development of closer ties in education between Australia and other countries and the demand for education in many countries in Asia, Africa and the Pacific have brought about a remarkable growth in the number of overseas students who come to Australia to further their education. Part of the growth and much of the awareness of the facilities available may be attributed directly to the schemes mentioned on pages 623-4. Since 1955, when there were about 3,500 overseas students in Australia, the number has increased to some 14,000 in 1966. More than half attend institutions of higher education such as universities and technical colleges. Between 1955 and 1966 the numbers of foreign students in institutions of higher education had risen from about 1,800 to 7,300, most of whom came from Asian countries. Australian institutions have shown a readiness to accept overseas students, and in many cases special provisions have been made to suit their needs. Nevertheless, population growth and the demand for education, especially for higher education, within Australia have forced many institutions to restrict the admission of overseas students in common with Australian students.

Organisations associated with education

Australian Council for Educational Research

The Australian Council for Educational Research, a non-governmental body, is engaged on educational research in a wide variety of fields, ranging from tertiary to pre-school education. It conducts surveys and inquiries, makes grants to approved educational investigators, serves as a centre for disseminating educational information, provides training for research workers, and standardises and distributes educational and psychological tests for use in Australia. Although this council is an autonomous body, the Commonwealth and State Governments give substantial financial support.

World Education Fellowship

The World Education Fellowship, formerly known as the New Education Fellowship, is a world organisation of parents, educators and other citizens interested in the development of new educational practices. It was founded in London in 1915 and spread to Australia at the time of a regional conference held here in 1937. There are now sections in each State. Its Australia-wide journal *New Horizons in Education* is published twice a year. A major conference of the world organisation was held in Australia in 1962, during which prominent educationists from Australia and overseas met in all States.

Australian College of Education

The Australian College of Education was formed in 1959. Its aim is to bring together leading teachers and administrators in every field of education, to raise the standard of the profession of education in Australia, to establish and proclaim fundamental educational values, and to recognise outstanding contributions to educational practice. Chapters of the College have been set up in all States, and several of the addresses and papers delivered at meetings of the College have been issued in published form.

Parent and citizen organisations

In Australia, where all government schools are administered by central departments, there is limited opportunity for local participation in education. Public interest is expressed through parents' committees or organisations of parents and other citizens interested in supporting their local school. The Education Acts of all States provide for the formation of groups of this type, whose aims are to promote an interest in the school by bringing parents and teaching staff together, to help provide supplementary teaching aids and recreation materials, to foster the regular attendance of children at school, and to help find accommodation for teachers. In several States the general maintenance of school buildings, equipment and grounds is a statutory responsibility of the parent groups, costs being covered by government grants. Lunch canteen services at local schools are maintained by groups in some States. Parent groups have established school children's insurance schemes, operated through State Government insurance offices or private insurance companies. These schemes cover accidents to children which occur between the time of leaving home for school and returning home by the usual direct route.

State-wide councils of federations of parents' groups are associated in a federal body, the Australian Council of School Organisations.

CULTURAL ACTIVITIES

Libraries

The Munn-Pitt report of 1935 greatly stimulated interest in libraries and librarianship throughout Australia. This is seen in the rapid development of libraries, the passing of legislation in all States to increase library services, and the establishment in 1937 of the Australian Institute of Librarians to improve the standard of librarianship. This body was reconstituted in 1949 as the Library Association of Australia and incorporated by Royal Charter in 1963, and its functions now include the promotion and improvement of libraries and library services. The Association conducts annual examinations in all States, for which students are prepared by courses of instruction. Formal library schools are conducted by the National Library of Australia, Canberra, the Library Board of New South Wales (held at Newcastle Public Library), and the State Library of Victoria, Melbourne. In 1960 the first library school to be attached to an Australian University was opened in the University of New South Wales, and the Royal Melbourne Institute of Technology set up a library school in 1963.

Commonwealth libraries

National Library of Australia. This Library grew directly from the Library of the Commonwealth Parliament established in Melbourne in 1901, the Committee of which soon afterwards announced its intention of developing a library patterned on the Library of Congress at Washington, U.S.A., capable of serving purposes beyond those essential to the Parliament itself, appropriate to a national library and on a national scale. This policy was steadily pursued, so that, in addition to its primary function of serving Parliament, it gradually became a central source of information for the Government and its departments and other agencies, and assumed increasing reference and bibliographical responsibilities in relation to scholarship and research in Australia and abroad. It was also influenced by the basic elements of the national library concept of the older countries of Europe: namely, that a national library is the proper place to

collect the national literature systematically and to make it known and available for use, and that it is a place to which scholars may turn for what is most significant in the literature of other countries. For these growing extra-Parliamentary activities the Parliamentary Library Committee, in 1923, adopted the title of Commonwealth National Library.

In 1957 a committee appointed to examine the future control and functions of the Commonwealth National Library recommended its establishment as the National Library of Australia, separate from the Parliamentary Library, with wide functions and controlled by a board subject to a Minister; the transfer, as a separate agency to an appropriate department, of its Archives Division, which constituted the Commonwealth's agency for the custody and organisation of departmental records of permanent value which need no longer be held within departmental offices; and that the Parliamentary Library be a separate library under separate Parliamentary control. Continuing co-operation, where possible, between the two libraries was also proposed.

Effect was given to these recommendations by the *National Library Act* 1960, which created the National Library of Australia as a body corporate under the control of a Council of nine members, of whom one is a Senator elected by the Senate, one a member of the House of Representatives elected by that House, and seven appointed by the Governor-General. Its functions are: to maintain and develop a national collection of library material, including a comprehensive collection relating to Australia and the Australian people; to make the national collection available to such persons and institutions in such manner and subject to such conditions as the Council determines with a view to its most advantageous use in the national interest; to make available such other services in relation to library matters and material, including bibliographical services, as the Council thinks fit, particularly for the purposes of the library of the Parliament, the Departments and authorities of the Commonwealth, and the Territories of the Commonwealth; and to co-operate in library matters (including the advancement of library science) with authorities or persons, whether in Australia or elsewhere.

The National Library comprehensively collects and preserves Australian books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, moving picture films, and sound recordings. It is assisted in this by the deposit provisions of the *Copyright Act* 1912-1966 and has also been enriched by the acquisition of such notable collections as the Petherick collection of 16,500 items in 1911, the Cook manuscripts in 1923, the Cumpston collection on Public Health in Australia in 1936, the Mathews Ornithological collection in 1940, the Nan Kivell collection of 16,000 items of Australian and Pacific interest including original paintings, prints, manuscripts, and printed material in 1959, the David Nichol Smith collection of 18th century English literature in 1962, the Clifford Family collection in 1964, and the Ferguson collection which is still under transfer. A feature of the Library's Australian work is the copying on microfilm, in association with the Public Library of New South Wales, of all important unique material overseas relating to Australia, including over three million pages in the Public Record Office in London. Compilation of a Guide to Collections of Manuscripts Relating to Australia began in 1964. The Library maintains a permanent exhibition of selected paintings, prints and other historical material from its collections. This exhibition is displayed in Parliament House, Canberra.

The Library publicises Australian publications, both at home and abroad, through select lists, the *Australian Books* (annual), the *Australian Public Affairs Information Service* which is a subject index to current literature (monthly with an annual cumulation), and by collections of Australian books maintained by it at all posts at which Australia is officially represented abroad. In London and New York the National Library maintains and staffs Australian reference libraries supervised by its own Liaison Officers in those centres. In the discharge of its wider bibliographic responsibilities, the library publishes the *Australian National Bibliography* (weekly with monthly and annual cumulations), which lists books, pamphlets, maps, prints, sheet music, government publications, the first issue of each new periodical or newspaper, and moving picture films produced in or relating to Australia. Commonwealth and State official documents, both monographic and serial, are listed in *Australian Government Publications* (annual). The Library is also building up union catalogues of serials in the social sciences and humanities, and of monographs in Australian libraries. A revised loose-leaf edition of *Serials in Australian Libraries: Social Sciences and Humanities*, of which the letters A-E have been issued since 1964, will progressively supersede the interim edition published in two volumes in 1963.

In 1956 the Australian Bibliographical Centre was established within the National Library to serve as the secretariat of the Australian Advisory Council on Bibliographical Services. The Council, made up of representatives of the National Library, State libraries and library boards, Parliamentary libraries, public libraries, college libraries, school libraries, special libraries, the Commonwealth Scientific and Industrial Research Organization, each of the universities, the Library Association of Australia and archivists, plans the further development and co-ordination of bibliographical services and co-operates with Unesco and its committees. The Centre organises bibliographical projects recommended by the Council and operates as a centre for bibliographical information in Australia and overseas. It has published a *Union List of Newspapers in Australian Libraries: Part 1: Newspapers published outside Australia* (1959); and *Part 2:*

Newspapers published in Australia (1960). Both were supplemented in 1964. *Resources of Australian Libraries*, a summary report of a survey conducted for the Council in 1961 by Maurice F. Tauber, was published in 1963.

The Library acts as a central library of documentary and educational films, its film collection containing approximately 8,000 titles, together with Australian historical films and a great number of film strips. It published *Australian Films: a Catalogue of Scientific, Educational and Cultural Films, 1940-58* in 1959 and annual supplements in succeeding years. A revised edition of the *Catalogue of 16-mm. Films*, which lists all films available for loan, was published in 1960. It was supplemented in 1964 and annual accession lists are issued. Special efforts are made to discover and preserve samples of early Australian film production.

Through its Extension Services Section the Library conducts the Canberra Public Library Service for residents of the Australian Capital Territory, to whom 774,375 books were lent during 1965-66. It also assists in the provision of similar services in the Northern Territory, the Territory of Papua and New Guinea, and Norfolk Island.

The National Library's collections contain approximately 885,000 volumes, 26,000 paintings, pictures and prints, 15,000 reels of microfilm, 1,000 running feet of manuscripts, 25,000 motion picture stills, 16,000 reels of moving picture films, 142,000 maps, and 400,000 aerial photographs. Special features of the book collection are its strong holdings of Australian, materials relating to the Pacific area and east and south-east Asia, the publications of foreign governments and international organisations, and works in the social sciences, particularly in political theory and economics.

Patent Office Library. The Library of the Commonwealth Patent Office, Canberra, contains approximately 10,850 books and a wide variety of periodicals and other literature relating to pure and applied science, industrial technology and the industrial property (patent, trade mark, design, and copyright) laws and practice of most countries. Patent specifications of inventions are received from the principal countries of the world; present holdings are more than 9,670,000. Indexes include a microfilm of a classified index to 3,000,000 U.S.A. patents and translations of abstracts of U.S.S.R. patents.

Commonwealth Archives Office. In 1943, following a report by an Inter-departmental Committee, the Prime Minister directed the formation of a War Archives Committee to arrange for the preservation of war records. This Committee recognised that war archives could not be separated from peace-time archives, and in 1946 the name was changed to the Commonwealth Archives Committee. In 1952 the National Library became the sole Archival Authority for the Commonwealth and the Chief Archives Officer became the Executive Officer for the Committee. In March 1961, in accordance with a recommendation of the National Library Inquiry Committee, the Archives Division of the National Library was reconstituted as the Commonwealth Archives Office within the Prime Minister's Department. The Archives Office is primarily a central agency for the control of those records created by the Commonwealth Government which are no longer required for frequent use in the day-to-day business of government. This function is carried out through the following three basic activities.

Control of destruction. No Commonwealth records may be destroyed without the concurrence of the Chief Archivist whose responsibility it is to safeguard reference interests other than those of the department which compiled the records. This concurrence is given as far as practicable through continuing disposal authorities which enable Commonwealth departments to destroy certain routine classes of records automatically, but records not covered by such continuing authorities are checked before destruction is authorised.

Provision of accommodation. Any records which are no longer in active use but which are considered, either by the originating department or by the Archives Office, to warrant preservation, either permanently or for a further period, may be transferred to an archives repository. While in archival custody they are arranged and described so that the best use can be made of them.

Provision of information. Records in the custody of the Archives Office are available for use by the depositing and other departments of the Commonwealth Public Service. The Office also provides departments with a service for the provision of information from the records in its custody.

As a complementary function the Office also provides a service to persons engaged in academic and other forms of research. The headquarters of the Commonwealth Archives Office is in Canberra and there are branches in Sydney, Melbourne, Brisbane, Adelaide, and Perth.

Commonwealth Scientific and Industrial Research Organization. The library holdings of the Organization cover the pure and applied sciences. In addition to the Central Library in East Melbourne, each of the Divisions and Sections has a specialised collection covering such subjects as food preservation, forest products, chemistry, physics, animal health, and fisheries. The collections are particularly strong in the publications of overseas scientific and technical research institutions, with many of which extensive exchange arrangements have been made.

The Central Library maintains a union catalogue of the holdings of all C.S.I.R.O. libraries and is responsible for the following publications: *Scientific Serials in Australian Libraries*; *Australian Science Index*, an index of articles published in Australian scientific and technical periodicals; a *Directory of Scientific and Technical Research Centres in Australia*; and *C.S.I.R.O. Abstracts*, which include abstracts of papers published by C.S.I.R.O. officers, C.S.I.R.O. translations, translations available from other Australian organisations, and additions to the British Commonwealth Index of Scientific Translations. The larger libraries in the Organisation have photocopying facilities which, while normally for internal use, provide a service for the public when a publication is not held elsewhere in Australia.

The Australian War Memorial Library. In the War Memorial library are housed the documentary and pictorial records of Australia's fighting services in the 1914-18 and 1939-45 Wars, together with collections covering the war in Korea, 1950-53, and earlier wars in which Australian troops participated—Sudan, 1885; South Africa, 1899-1902; and the Boxer Rebellion in China, 1900-01. Books, periodicals and other records covering contemporary trends and events in the fields of military history and military science are constantly being added.

The printed records section contains approximately 70,000 volumes, a large collection of military maps, newscuttings and newspapers, sound recordings of war leaders, personalities and events, war posters, and postage stamps. Many personal collections by distinguished soldiers and historical documents relating to the wars have also been placed in the Memorial's custody for preservation. Written records comprise correspondence files of headquarters and units of both World Wars, and the original war diaries compiled from day to day by each unit during its service. The collection of official war photographs covering the 1914-18, 1939-45 and Korean Wars numbers over 250,000, and a collection of official motion picture film depicts Australia at war. Facilities for public research are not yet fully developed, but requests for information are met where practicable.

Other Commonwealth Government libraries. Most Commonwealth authorities have specialised collections in their own fields and in addition draw largely on the National Library.

Northern Territory Library Service. The Northern Territory Library Service maintains five centres in the Territory. At 30 June 1966 stocks totalled 52,371 volumes which were held at the following centres: Darwin, 24,035; Nightcliff, 3,829; Alice Springs, 16,298; Tennant Creek, 4,405; Katherine, 3,804.

State libraries

State Public Libraries. In each of the capital cities there is a well-equipped public library, the libraries in Melbourne and Sydney especially comparing very favourably with similar institutions elsewhere in the world. The following paragraphs describe these libraries and other library services in each State.

New South Wales. The Free Library Movement in New South Wales, founded for the establishment of a system of public libraries on the basis suggested in the Munn-Pitt Report of 1935, helped to pave the way for the Library Act, 1939-1959, which was fully proclaimed as from 1 January 1944. At 30 June 1966, 173 councils had established libraries in terms of the Library Act. During 1966 they spent on their libraries \$4,042,694, including \$1,055,712 received in subsidy. There are 225 libraries, of which 66 are in the metropolitan area and 159 in the country. There are also 23 bookmobiles, of which 2 are in Sydney, 7 in the suburbs of Sydney, and 14 in country municipalities and shires. These libraries contain 3,296,288 volumes.

New South Wales departmental libraries are staffed by officers attached for duty from the State Library, which also provides a central cataloguing service for municipal and shire libraries constituted under the 1939-1959 Act. The State Library maintains an adult education section servicing adult education activities for the universities of Sydney and New England and the Workers' Educational Association.

The Circulation Department forwards books on loan to municipal and shire libraries and to individual borrowers. With the transfer of the School Box Service to the School Library Service of the Department of Education in 1965, 42,120 books were written off stock. The School Box Service had been operated as a service to country public schools by the Circulation Department since 1920. The total stock of the Department thus decreased to 63,581 volumes, all of which are now in the Reference Section. During 1965-66, 4,402 books were lent to public libraries and institutions, many of them in country areas, and 33,208 to individual borrowers.

The State Library, known as the Public Library of New South Wales, includes a general reference department of 518,469 volumes, together with the Shakespeare Tercentenary Memorial Library, and the Mitchell and Dixon Libraries and Galleries which are mainly devoted to Australian and Pacific material. The Mitchell Library, with more than 60,000 volumes and pamphlets and 300 paintings, was bequeathed to the trustees of the Public Library in 1907 by Mr. D. S. Mitchell, together with an endowment of \$140,000. In 1966 there were 216,980 volumes in the

library, in addition to valuable manuscripts, maps and other material. In 1929 Sir William Dixon gave a collection of historical pictures then valued at \$50,000. These were subsequently added to and at his death in 1952 Sir William bequeathed the whole of his collection of books, manuscripts, pictures, and other material, together with an endowment of more than \$226,000, mainly for the printing or reprinting of historical documents relating to Australia and the Pacific. The total number of volumes in the State Library now exceeds 844,000, apart from manuscripts, historical pictures and other material. The maintenance and control of the ordinary lending branch of the Public Library were transferred in 1908 to the Sydney Municipal Council to become the City of Sydney Public Library. The State Library, which had previously been the repository for State archives, transferred this responsibility to an Archives Authority in June 1961. The Authority consists of nine members, of whom the Trustees of the Public Library have a right to nominate one.

Other important libraries in New South Wales are: Teachers' Colleges, 294,741 volumes; the City of Sydney Public Library, 264,291; Railway Institute, 170,100; Technical Education Branch, 195,683; Australian Museum, 35,014; Government Transport Institute, 28,743; New South Wales Teachers' Federation Library, 23,000; Workers' Educational Association, 14,400; and the Library at the National Herbarium, 10,766 volumes. At 30 June 1966 the Parliamentary Library contained 157,821 volumes.

Victoria. The modern movement in municipal library service dates from the inception of the Free Library Service Board in 1947. The Free Library Service Board was a State Government instrumentality which planned, encouraged and subsidised the development of municipal library services. Under the *Library Council of Victoria Act 1965*, the control of the Board passed to the Library Council of Victoria and in 1966 its office was redesignated the Library Services Division of the Library Council.

In 1967, 138 Councils, representing 2,569,000 Victorians, shared Government library grants amounting to \$1,120,000. Of this amount, \$1,042,000 was direct municipal library subsidy. With the addition of expenditure from these Councils' own funds the total expenditure on municipal library services for 1966-67 will be nearly \$2,462,000, representing an average expenditure of approximately 96 cents per head of the population served. In 1966 half a million borrowers used their free library services, now totalling 1,886,000 books, to the extent of almost 11 million issues.

Particularly in the country, service has been developed by means of regional libraries. These services, of which there are 18 at present, comprising a total of 76 councils, consist of groups of councils which pool their resources, book-stocks and trained staff. A development since 1962 has been the formation of three Metropolitan Regional Library Services. The Victorian Government provides an Establishment and Regional Library Development Grant of \$50,000 per annum. In 1967 this was increased by \$10,000.

There are 8 bookmobile services operating in Victoria, 5 in country regions and 3 in the metropolitan area.

The State Library of Victoria was established in 1856. It is controlled by the Library Council of Victoria and receives its finance from the State Government. The reference collections now total about 840,000 items, and the lending and travelling libraries have another 185,000 volumes. In addition, the library files 4,500 current periodicals, about 2,000 government publications from Australia and overseas, and 500 newspapers, in all about 50,000 volumes. Special collections include the J. K. Moir Collection of Australiana, the M. V. Anderson Chess Collection, and the Green and Brodie Shipping Collections. The Victorian Historical Collection contains pictures, drawings, prints, and objects of historical interest. The Archives Division is responsible for the preservation of government records.

Queensland. The Library Board of Queensland was established in 1945 under the provisions of 'The Libraries Act of 1943'. Its duty is to attain the fullest co-operation and improvement of the library facilities of the State, with the object of placing such facilities on a sound basis for the benefit and educational improvement of the citizens generally. The Board consists of six members including the State Librarian as *ex officio* member and secretary. A general function of the Board is to ensure that the fullest co-operation exists with the Department of Education, the University of Queensland, local bodies, and other bodies having for their object the encouragement of education, literature and the arts and sciences. A specific function of the Board is the control and management of the Public Library of Queensland. Its policy is to build up the main collection of the Library as the State's reference centre.

The Country Extension Service, which is administered as a department of the Public Library, lends books of non-fiction to adults and children residing outside the metropolitan area and to municipal libraries in areas of low population.

The Oxley Memorial Library, established in 1923, has been administered as a department of the Public Library since 1946, but the collection has been kept separate. It contains books, manuscripts, pamphlets, and other graphic material relating to the history and literature of Australia, and of Queensland in particular, and provides facilities for research students in Queensland literature and history.

In 1958 the section of the Libraries Act dealing with the preservation of public records was proclaimed, and in 1959 an Archives Section of the Public Library was instituted and an archivist appointed.

The Library Board staffs the libraries of the Teachers' Colleges and the Queensland Institute of Technology as well as the libraries of ten government departments, of which the largest is the Department of Primary Industries. The work is co-ordinated by an officer-in-charge, who also gives assistance and advice to independently staffed departmental libraries.

Since 1948 a course in librarianship has been held annually at the Public Library for the purpose of preparing trainees for the examinations of the Library Association of Australia, up to 1961 for its Preliminary Examination, and from 1962 for subjects 1 to 3 of its re-organised Registration Examination. In 1959 a course covering some subjects of the Association's Registration Examination was inaugurated at the Central Technical College, Brisbane.

The holdings of the Public Library of Queensland and its extension services in 1965-66 were: main reference collection, 175,337 volumes and 10,421 maps and pamphlets; Country Extension Service, 85,890 volumes; Oxley Memorial Library, 24,428 volumes and 23,922 maps, pamphlets and miscellaneous items.

Local authorities are empowered by the Libraries Act to establish and conduct library services as a function of local government. The Board encourages local authorities to use these powers. In 1965-66, 76 local authorities were conducting 130 library services. The Brisbane City Council has established 18 of these libraries. There were 105 libraries in Queensland free to adults. To help overcome the problems of a large area and sparse population, various local authorities provide library services on a regional basis. By 30 June 1965, 4 regional library services had been established; the South Western (7 shires), the Central Western (8 shires), the North Western (10 shires), and the Central Highlands (5 shires), with headquarters at Charleville, Barcardine, Mt Isa, and Emerald respectively. During 1965-66 the Board received a grant of \$514,102 from consolidated revenue to finance the activities of the Public Library and to pay subsidies to local bodies of 50 per cent of endowable expenditure on books and the acquisition or improvement of library buildings and equipment. Subsidies were paid to 4 regional library service boards, 53 local authorities and 37 other bodies.

The library of the Parliament of Queensland was established in 1860. At 30 June 1966 the library held 98,000 books and pamphlets, consisting of official publications and books devoted largely to history, the social sciences, biography, and literature.

'*The Libraries Act Amendment Act of 1949*' provides for the Public Library and the Parliamentary Library each to receive a copy of all books, pamphlets, maps, and other printed material published in Queensland.

South Australia. In the reference department of the Public Library of South Australia there are about 235,700 volumes, most of which may be borrowed. Approximately 5,000 periodicals are filed and the collection of newspapers includes every newspaper printed in South Australia. There are 46,800 volumes in the lending department available to persons living in the metropolitan area, and the country lending service has 301,000 volumes, of which more than one-third are suitable for children. The library has an active programme for the publishing of facsimile editions of early Australian texts.

The Research Service specialises in scientific and technical inquiries and supplements the resources of the Public Library by borrowing from other libraries and by obtaining microfilm copies of material not available locally. It has an extensive collection of trade catalogues.

The library of the Parliament of South Australia held approximately 60,000 volumes at 31 December 1966.

There are 24 local public libraries in South Australia provided by 18 local government authorities. The libraries are subsidised on a \$1 for \$1 basis by the State Government. The Libraries Board of South Australia, through the Public Library of South Australia, provides various central services. Book-stocks are pooled in the Public Library of South Australia and are interchanged between the libraries.

At the end of June 1966 these local public libraries contained 178,142 books. There were 108,911 registered borrowers. During 1965-66, 1,457,656 books were lent.

Western Australia. In 1955 the Library Board of Western Australia was made responsible for all public library services throughout the State to which the State Government contributes funds. The Board has the following major functions: to encourage local authorities throughout the State to establish public libraries and to provide as a State subsidy all books and bibliographical services necessary for such libraries when established; to administer the State Reference Library; to advise the Government on all matters relating to libraries; and to provide for the training of librarians.

Local public libraries are subsidised on a \$1 for \$1 basis, the local authority providing accommodation and staffing, and the Board all books and related services. The Board provides at least one volume per head of the population. All non-fiction books may be made available at any public library throughout the State on request to the Board. All cataloguing is done by the Board. The first library under this scheme was opened in August 1954. By 31 December 1966, 97 libraries had been established.

The State Reference Library, established in 1887, is the reference division of the Library and Information Service of Western Australia. In addition to providing the normal facilities of a reference library for the metropolitan area, it extends its service throughout the State through local public libraries. It is divided into three divisions responsible for service in the subject fields of Western Australian history, science and technology, and the humanities.

The State Bibliographical Centre and the Central Music Library are housed in the State Reference Library building, and there is also a commercial information centre. The State archives are maintained by the State Reference Library and managed by the staff of the Battye Library. The State Reference Library is fully equipped with microfilm and photocopy apparatus.

The book-stock of the Board at 30 June 1966 was: 732,251 volumes, comprising circulation stock (including books in public libraries), 496,432 volumes; State Reference Library, 223,430 bound volumes; Central Music Library, 2,954 books on music and 9,435 scores.

The University of Western Australia, through its Adult Education Board, manages the Adult Education Library of some 17,000 volumes of general reading and fiction. Books are sent to country readers each month.

There are some 100 special libraries in government departments and industrial firms. Union catalogues of periodicals and books received in the libraries in Western Australia are maintained by the Library Board of Western Australia in the Bibliographical Centre in the State Reference Library building.

Tasmania. The Tasmanian Library Board, constituted in 1944, is responsible for administering the State Library headquarters in Hobart, for the extension of library services throughout the State, for the control of State aid to libraries, and for the State archives. The State Government provided \$477,231 towards the cost of the library services in 1965-66.

Municipal libraries are assisted with the purchase of books and participate in a book exchange scheme. In 1966, 47 municipalities took part in the service, leaving only 2 outside the scheme. In Hobart the Board operates, on behalf of the City Council, the Hobart Lending Library and a bookmobile which serves metropolitan schools. From the State Library of Tasmania 2 other bookmobiles operate in 13 southern municipalities, catering for areas without library premises, for children, old people's homes, etc.

Five municipalities and the Tasmanian Library Board co-operate in a Regional Library System with headquarters at Burnie. A bookmobile serves rural areas, and small public libraries serve the larger townships of the region. The city of Launceston operates a Lending and Reference Library for the city and the neighbouring municipalities, and supplies bookmobile services to neighbouring rural areas.

The Board also operates a Reference Library in Hobart from which reference and information services are available to people throughout the State. There is also a documentary film library and a recorded music library. The Board arranges screenings of documentary films, recitals of recorded music, poetry and play readings, library weeks in country centres, exhibitions of books, photographs, etc.

At 30 June 1965 the State Library, Hobart, held 99,478 volumes in the reference branch, 83,138 volumes in the ordinary lending branch, 178,660 volumes in the country lending branch, and 140,842 in the children's branch.

The Parliamentary Library works in close collaboration with the State Library, which provides a reference officer to serve members during sessions.

University libraries

These libraries provide material not only for the education of graduates and undergraduates, but also for research workers and practical investigators all over the continent. Much of the material they contain is not available elsewhere, for although in most cases smaller, they are in many directions more highly specialised than the public libraries. They lend to one another and to State and private institutions as well as to individual investigators. Each of them is governed by a librarian, who is responsible as a rule to an executive sub-committee and a committee which is practically co-extensive with the professorial staff.

The following table shows the volumes held, accessions during the year, and expenditure of the Australian university libraries.

UNIVERSITY LIBRARIES

University	Volumes (a)	Accessions during year (b)	Expenditure (c)
	'000	'000	\$'000
Australian National	398	35	610
Sydney	988	66	812
New South Wales	302	27	628
New England	211	17	231
Newcastle	103	11	155
Macquarie	51	51	117
Melbourne	471	50	762
Monash	215	20	573
La Trobe	41	41	206
Queensland	441	36	549
Adelaide	413	30	466
Flinders	73	22	200
Western Australia	281	21	350
Tasmania	146	7	171
Total	4,134	434	5,830

(a) 31 July 1966. (b) Year ended 31 July 1966. (c) During year ended 31 December 1965.

Australian National University. This library consists of two main collections; the former Australian National University Library, founded in 1948, which serves primarily the Institute of Advanced Studies, and the former Canberra University College Library, founded in 1938, which serves primarily the School of General Studies. At the end of 1966 the stock included 76,000 volumes in oriental languages. The collection serving the Institute of Advanced Studies (215,000 volumes) specialises in the fields of the physical and medical sciences, excluding clinical works. The R. G. Menzies Building of the University Library, which was opened by Queen Elizabeth II in March 1963, houses the administrative, cataloguing, etc., departments serving the whole university as well as certain research collections of the Institute of Advanced Studies. In the social sciences the library endeavours to provide a good working collection while giving consideration to the holdings of the Commonwealth National Library. It possesses significant collections in anthropology, linguistics, mathematics, and mathematical statistics. The collection serving the School of General Studies (130,000 volumes) has been built up to meet the needs primarily of undergraduates studying arts, economics, law, oriental studies, and science.

University of Sydney. The library consists of the central collection which is known as the Fisher Library, the Law Library, the Medical Branch Library, the Burkiitt Library for pre-clinical medicine, and some 49 departmental libraries. The University Library holds a total of more than one million volumes.

The first books were acquired in 1851, and shortly afterwards the library of Sydney College was added. The collection of Nichol D. Stenhouse was acquired in 1878 as the gift of Thomas Walker. In 1885 Thomas Fisher bequeathed the sum of \$60,000, the income from which is used as a book fund. The Fisher Fund was matched in 1961 by establishment of the W. H. and Elizabeth M. Deane Library Fund. Perhaps the finest collection in extent and importance which has been given to the University is that of Sir Charles Nicholson. There have been numerous other benefactions, among which may be mentioned the library of Sir Francis Anderson, the W. H. Deane collection of books and manuscripts and the Dalley-Scarlett music library. In 1961 the University acquired the English literature collection of the late Hugh Macdonald, and the late Professor J. Stewart's library, an outstanding collection on archaeology and numismatics, was acquired in 1963. The Sydney University Library has an extensive collection of mediaeval manuscripts and early printed books.

University of New South Wales. The libraries in this university consist of the Central Library and a Bio-medical Library at Kensington. There is also a library at Wollongong University College and the Broken Hill Division. In December 1966 the university had 313,242 volumes in its libraries.

University of New England. The library was founded in 1938, when the New England University College was established. Sir William Dixon was its first benefactor. The library, which contains 185,000 bound volumes, is adding to its collection at the rate of approximately 20,000 volumes

a year. It receives about 4,800 current periodicals annually. It is housed in a three-storied, air-conditioned building, which also makes provision for a bindery and photographic and archives division. A post-graduate and research library is planned as an extension of the present building. The library has its own lecturer in bibliography and library science, and conducts formal courses in librarianship. A multi-copy collection of 36,000 volumes for external teaching is housed in the Public Library of New South Wales in Sydney.

University of Newcastle. The library has been in existence since 1951, although it was associated with the Technical College Library until 1961. In January 1966 a major part of the library's collections were transferred to temporary premises at the new site of the university at Shortland. About one-sixth of the collections remains at the old site at Tighes Hill for the use of the departments still operating there. The library has slowly but steadily developed over the years and now has a collection of 110,000 volumes. In the vicinity of 2,500 periodicals are taken into the library stock each year as a result of both subscription and donation. There are no departmental libraries. The resources of the library are used extensively on inter-library loan in the Newcastle district, particularly by local industries. The first stage of the permanent library building is under construction and it is anticipated that it will be ready for occupation in January 1968.

Macquarie University. The library began in 1965 to acquire books and to plan for its opening in 1967. It occupied temporary quarters in North Sydney until mid-1967, when it moved into the first stage of a new air-conditioned library building, which is centrally situated on the university site at Eastwood and planned to house eventually 800,000 volumes. The library's initial purchases were restricted mainly to undergraduate level material in those schools in which students were enrolled in 1967. The library subscribes to 1,300 serials and has an audio-visual area. When the library opened in March 1967, approximately half of its total collection of 70,000 volumes had been donated by private individuals, firms and other libraries.

University of Melbourne. Early in 1854 the first allocation for books was made, but the library was housed in temporary quarters until 1959. The W. L. Baillieu Trust made available the first instalments of a \$200,000 gift for building purposes, which have been followed by subsequent gifts and substantial grants from the Commonwealth and State Governments, and a new building was occupied at the beginning of 1959, the first in the university to be designed specifically for library purposes. Since 1959 the use of the library has increased fourfold, and during the academic year admissions of readers to the building average 8,000 a day. The resources of the library are also used extensively on inter-library loan by government instrumentalities, industries and other organisations throughout Australia. The University Library, including 13 branch libraries in various departments, is administered from the centrally situated Baillieu Library. The large medical branch library is specially rich in periodicals.

Monash University. The Library contains about 250,000 volumes and subscribes to some 5,500 journals. It has been decided that the library organisation will develop into four large units—the main library, a bio-medical library, a law library, and a library for the physical sciences and technology. The physical sciences and technology library has been named the Hargrave Library and was opened in December 1962. The main library, catering mainly for the humanities, was occupied in November 1963. The bio-medical library was occupied in 1966.

La Trobe University. The university was founded in December 1964 and the first books were acquired in 1965. Library activities began at 474 St Kilda Road, the temporary headquarters of the university itself. The move to the new building at the university site at Bundoora was completed in the first week of February 1967. The library is housed in a three-storey air-conditioned building which is designed to be extended horizontally in two stages by 1977. In 1967 only the top floor was occupied by the library. The ground floor and first floor were used for science teaching and office facilities which will be transferred to the science buildings in 1968. By the end of 1966, 45,000 volumes had been acquired and 1,340 serials received by gift or subscription. It is estimated that the accommodation available in 1967 will house about 100,000 volumes and 190 readers. The library will initially cater for the Schools of Humanities, Social Sciences, Biological Sciences, and Physical Sciences, containing the disciplines of English, French, history, philosophy, Spanish, economics, politics, sociology, biology, chemistry, mathematics and physics.

University of Queensland. The library was founded in 1911. There is a main library and a number of departmental libraries at St Lucia, and medical libraries at the Medical School and at teaching hospitals. The library receives more than 10,000 current periodicals. It has notable collections in geology, the history, development and culture of the Pacific region, and tropical aspects of agriculture, veterinary sciences and biological sciences. The total collection numbers some 450,000 volumes.

University of Adelaide. The main library is the Barr Smith Library which commemorates its first benefactor, Robert Barr Smith, who, with members of his family in and after 1892, gave the university over \$100,000 for the library. Seats are provided for 1,000 readers, including 270

in the main reading room. There are branch libraries for medicine, law and music. The South Australian branches of the Australian Medical Association, the Australian Physiotherapy Association, and the Australian Dental Association make annual contributions towards the maintenance of the medical library in return for borrowing privileges for their members. The Waite Agricultural Research Institute has a separately administered library of about 22,000 publications in agriculture. Total holdings of the university libraries at the end of 1966 were 429,000 volumes. Some 14,600 serial titles are received.

The Flinders University of South Australia. The acquisition of books for the library commenced in 1963 when the first library staff were appointed. The library occupied the first stage of its permanent building at the end of 1965, and when teaching commenced in March 1966 the collection consisted of some 60,000 volumes. Approximately 20,000 volumes are being added each year and the library receives currently about 2,300 periodical titles.

During the early development of the library emphasis is being placed on material to support the current teaching and research programmes of the university. Special attention is being paid to fields where little material is available elsewhere in Australia, for example Spanish literature.

University of Western Australia. The first full-time library staff was appointed in 1927. Provision for a permanent library building was not possible when the university moved to its present site, and space and facilities were inadequate for many years. A new four-storey building was completed at the end of 1963. The building provides facilities for microfilm readers, type-writing booths and photo-copying facilities. The University Library developed very slowly in the early years, but recently has been adding about 20,000 volumes a year to its stock. In addition to the main library there are a number of departmental libraries of which the more important are engineering, agriculture, pre-clinical, and law. There is also a medical library, in accommodation provided by the Royal Perth Hospital, for the use of the medical school.

University of Tasmania. To cater for an anticipated enrolment during 1967 of 2,600 students, the library currently has a collection of 161,490 volumes, and files 4,023 serial titles. The 1967 vote for all purposes is \$97,500, of which \$40,600 is allocated for books and \$48,400 for serial publications and back sets. The university library collects private and business archives and has a small rare book collection.

Children's libraries and school libraries

New South Wales. Children's libraries are being developed as departments of municipal and shire libraries. The Education Department maintains a school library service for the fostering of State school libraries, which are maintained partly by parents and citizens associations and partly by departmental subsidy. Secondary and central schools, and an increasing number of primary schools, have teacher librarians.

Victoria. Throughout Victoria an essential feature of libraries is the service for children; 117 municipal libraries share in a special children's library grant of \$10,000, and on the staff of the Library Services Division is a professional children's librarian who supervises and advises on work with children.

The Education Department is making provision for the building of library rooms in new schools. Where accommodation is available in existing schools, library furniture is provided free of cost to the schools, and the Government subsidises the purchase of books. In June 1966, 590 schools had central libraries. The Education Department has a library service officer with a small staff to advise and assist schools in the establishment and organisation of libraries. A one-year course for the training of teacher-librarians was established at Melbourne Teachers' College in 1955. Approximately 25 teachers are trained each year.

Queensland. The Library Board of Queensland stresses to local bodies the importance of providing adequate library services for children. There are in Queensland 128 libraries free to children, of which 16 are conducted by the Brisbane City Council. The children's libraries at Rockhampton, Toowoomba and Townsville are particularly active. Country children who are not catered for locally may borrow from the Country Extension Service which possesses a separate children's collection. The purchase of books for State school libraries in Queensland is financed by school committees and parents associations, with a subsidy from the Department of Education on a \$1 for \$1 basis. Trainees at the teachers colleges are instructed in school library organisation and management.

South Australia. A children's library of 36,000 volumes is used by school classes and individual children living in the metropolitan area. In 1965-66, 208,200 books were lent. There is a large collection of historical children's books assembled for the use of research workers. In August 1957 a youth lending service was opened for young people from thirteen to eighteen years of age. It has a stock of 15,500 volumes.

Western Australia. The Education Department provides library services, issues of books and subsidies on library books to schools. School libraries are supplied with shelving, furniture, stationery, and library supplies. The Library Services Branch of the department provides advisory services to assist schools in all aspects of library organisation and service. It also relieves schools of the professional and routine tasks of book preparation by providing a central cataloguing service for both new books and those previously uncatalogued in school libraries, a central processing service to cover books in plastic and prepare them for use, and a library book repair and binding service. Book selection in schools is assisted by a model library and by lists of recommended books.

The teachers colleges provide courses in school library organisation and service and have developed college libraries directed by qualified librarians. At the Perth Technical College part-time courses are provided on the syllabus for the examinations of the Library Association of Australia and are attended by many school librarians. The Perth Technical College and technical schools are equipped with libraries, and an allocation of funds is provided annually to each school and college department for the purchase of books and periodicals. Books for technical schools other than Perth Technical College are centrally ordered, catalogued and processed by the Library Services Branch.

All high schools are provided with library accommodation and furniture. New high schools have been provided with a main library, reading room, study room and librarian's office. High school libraries are staffed by one or two trained school librarians according to the size of the school. New high schools are issued with books to a value of \$1,000 in each of their first three years. All high schools receive annually an issue of books, as well as being entitled to a subsidy for the purchase of library books. A number of primary schools have organised school libraries in rooms which have become available, or in premises provided by the parents and citizens associations. Annual issues of books are made to all primary schools, varying according to the size of the school, and a subsidy is provided for the purchase of library books. The Charles Hadley Travelling Library provides 400 boxes of books which are circulated to all small schools, mission schools and special classes. Children who are unable to attend school, mainly those in isolated areas, are provided with books from the Correspondence School's library.

Tasmania. The Lady Clark Memorial Children's Libraries, with headquarters at the State Library, Hobart, aim at serving all children in Tasmania. At 30 June 1966, 164 children's libraries and depots had been established.

The Education Department provides library quarters in all high schools and in some of the larger primary schools. The purchase of books is financed by parents associations and by departmental subsidies. Teacher-librarians are appointed in high schools. The Schools Library Service issues loan collections of books to schools and gives advice on the setting up of school libraries.

Special libraries

Before the 1939-45 War the number of special libraries, apart from those maintained by government departments, was small, but during recent years many manufacturing, commercial, research and other firms, as well as statutory bodies, have found it necessary to establish special libraries to serve their staff. These libraries, which are most numerous in Sydney and Melbourne, are being increasingly administered by trained librarians.

Museums and art galleries

In 1964 an annual collection of statistics on a uniform basis was commenced from Australian museums and art galleries. The following paragraphs provide summarised results of the collection and refer individually to the more important museums and art galleries.

A museum or art gallery is considered to be a building, group of buildings or parts of buildings, managed as a unit and intended predominantly for the permanent display of objects of interest (museum) or objects of art (art galleries) to the general public. Institutions displaying live exhibits are excluded (the more important of these are mentioned on pages 643-4), as are buildings used for temporary displays (exhibitions, commercial galleries exhibiting only for sale) without a permanent stock of exhibits; permanent exhibitions which are ancillary to other activities, such as exhibits at council chambers, libraries, hotels, and other commercial enterprises providing services to tourists and sightseers; collections which are not readily accessible to the general public, such as university collections for the use of students and research workers; and historic homes, etc. not specifically intended for the permanent display of objects of interest (i.e. where the building itself and its normal fittings are essentially on display).

Museums and art galleries, 1966

The following table classifies by States and Territories and by ownership the institutions in Australia which have been identified in 1966 as museums and art galleries (branches of museums and art galleries are not shown separately).

MUSEUMS AND ART GALLERIES: STATES AND A.C.T., AND OWNERSHIP, 1966
(Number)

	Major institutions			Other institutions			All institutions
	Museums	Art galleries	Mixed institutions	Museums	Art galleries	Mixed institutions	
State or Territory—							
New South Wales	3	1	..	4	2	2	12
Victoria	2	1	..	2	5	2	12
Queensland	1	1	..	..	3	..	5
South Australia	1	1	..	6	1	..	9
Western Australia	1	1	..	1	1	..	4
Tasmania . . . . .	..	..	2	..	..	..	2
Northern Territory . . . . .	..	..	..	..	..	..	..
Australian Capital Territory	1	..	1	..	..	..	2
Ownership—							
Commonwealth Government	1	..	1	..	..	..	2
State Governments	8	5	1	2	..	1	17
Municipal authorities . . . . .	..	..	1	4	5	2	12
Private trusts . . . . .	..	..	..	2	5	1	8
Universities . . . . .	..	..	..	2	1	..	3
Private . . . . .	..	..	..	3	1	..	4
Total museums and art galleries	9	5	3	13	12	4	46

The following table sets out particulars of staff, display areas and expenditure for all museums and art galleries identified in 1966.

MUSEUMS AND ART GALLERIES: STAFF, DISPLAY AREA, ATTENDANCE AND EXPENDITURE, STATES AND A.C.T., 1966

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
Total staff—								
Museums	160	125	32	82	43	..	14	456
Art galleries	40	62	25	27	24	..	..	178
Mixed institutions	11	8	..	..	..	48	69	136
<i>All institutions</i>	<i>211</i>	<i>195</i>	<i>57</i>	<i>109</i>	<i>67</i>	<i>48</i>	<i>83</i>	<i>770</i>
Display area used—								
Museums '000 sq. ft	105	70	28	53	19	..	9	284
Art galleries	49	83	12	29	12	..	..	185
Mixed institutions	13	10	..	..	..	65	80	169
<i>All institutions</i>	<i>167</i>	<i>164</i>	<i>40</i>	<i>82</i>	<i>31</i>	<i>65</i>	<i>89</i>	<i>639</i>
Estimated attendance during year—								
Museums '000	697	840	122	251	135	..	174	2,220
Art galleries	352	485	73	108	81	..	..	1,098
Mixed institutions	70	31	..	..	..	123	523	747
<i>All institutions</i>	<i>1,119</i>	<i>1,356</i>	<i>195</i>	<i>359</i>	<i>216</i>	<i>123</i>	<i>697</i>	<i>4,065</i>
Estimated expenditure during year(a)—								
Museums \$,000	523	316	96	195	174	..	45	1,348
Art galleries	80	293	47	110	94	..	..	625
Mixed institutions	30	287	..	..	..	154	275	746
<i>All institutions</i>	<i>633</i>	<i>896</i>	<i>143</i>	<i>305</i>	<i>268</i>	<i>154</i>	<i>320</i>	<i>2,719</i>

(a) Excludes funds not controlled by the institution.

The following table gives figures for staff, display area, etc., for each of the seventeen institutions identified in 1966 as major because of the size of their exhibits, their popularity and the extent of the information and investigation services they provide.

MUSEUMS AND ART GALLERIES, MAJOR INSTITUTIONS: OWNERSHIP, STAFF, DISPLAY AREA, ATTENDANCE, EXPENDITURE, ETC., 1966

	Australian War Memorial, Canberra	Institute of Anatomy, Canberra	Australian Museum, Sydney	Museum of Applied Arts and Sciences, Sydney	Geological and Mining Museum, Sydney	Art Gallery of N.S.W., Sydney	National Museum, Melbourne	Institute of Applied Science, Melbourne	National Gallery, Melbourne
Ownership	Cwth	Cwth	State	State	State	State	State	State	State
Staff—									
Scientific, professional, teaching, preparational.	9	8	25	21	5	11	43	55	22
Administrative and clerical, attendants, cleaners, other	60	6	44	28	6	20	14	9	26
<i>Total staff</i>	69	14	69	49	11	31	57	64	48
Display area used '000 sq ft	80	9	52	27	9	40	41	26	44
Annual attendance . '000	523	174	382	269	36	320	(a) 350	478	374
Expenditure . . \$'000	275	45	245	(a) 200	(a) 64	55	175	129	206
Number of lectures	67	..	601	5,132	(a) 154	135	259	934	503
Total attendance at lectures '000	2	..	34	(a) 152	(a) 5	4	11	40	26
Field-work . . man-days	..	..	750	104	10	..	108	25	..
Books, periodicals, etc. in library . . . '000	83	1	35	8	..	4	n.a.	3	n.a.

	Queensland Museum, Brisbane	Queensland Art Gallery, Brisbane	South Australian Museum, Adelaide	National Gallery of South Australia, Adelaide	Western Australian Museum, Perth	Western Australian Art Gallery, Perth	Tasmanian Museum and Art Gallery, Hobart	Queen Victoria Museum and Art Gallery, Launceston
Ownership	State	State	State	State	State	State	State	Municipal
Staff—								
Scientific, professional, teaching, preparational .	10	5	37	7	13	3	11	9
Administrative and clerical, attendants, cleaners, other	22	10	21	16	25	10	13	12
<i>Total staff</i>	32	15	58	23	38	13	24	21
Display area used '000 sq ft	28	7	40	28	17	9	4	25
Annual attendance . '000	122	68	190	59	124	72	(a) 60	63
Expenditure . . \$'000	96	45	180	108	174	94	94	60
Number of lectures	102	12	94	170	320	34	n.a.	111
Total attendance at lectures '000	8	(a) 1	3	6	14	3	n.a.	3
Field-work . . man-days	171	..	910	..	350	..	30	100
Books, periodicals, etc. in library . . . '000	37	1	25	n.a.	13	1	..	11

(a) Estimated.

Some descriptive detail follows in respect of the seventeen major institutions listed in the foregoing table.

Australian Capital Territory

The Australian War Memorial, Canberra. The Memorial comprises the national collection of war relics and the building in which these are preserved. The building was opened in 1941. The memorial is administered by a director responsible to a board of twelve trustees. There is a collection of 4,000 art works and a museum collection of more than 40,000 war relics, the gathering of which began on the battlefields of the 1914-18 War and was continued during the subsequent campaigns in which Australian forces have participated. The collection has been

enhanced by gifts of relics from the governments of Great Britain, the sister dominions and allied countries, and also by presentations made by ex-servicemen and relatives of those who died. The collection consists of items such as tanks, aeroplanes, submarines, field-guns, boats, and the widest possible range of war trophies down to the smallest items, each relic dependent for its value on its historical background. The works of art, all by Australian artists, depict battle scenes, individual officers and men, etc., and include oil and water colour paintings, drawings, statuary, bronzes, dioramas, and mosaics. There is also a library, which is described on page 631.

The Australian Institute of Anatomy, Canberra. The Institute is described in the chapter Public Health, pages 565-6. It contains displays of biological and anatomical aspects of man and the anatomy of Australian animals. A display of Aboriginal and Melanesian artefacts from the National Ethnographic Collections is temporarily housed in the Institute.

New South Wales

The Australian Museum, Sydney. Founded in 1836, this is the oldest museum in Australia. It is administered by a director and a board of twenty-five trustees as a Government Department attached to the New South Wales Department of Education. It has fine collections of all groups of animal, including insect, fossils as well as mineral and ethnological collections, particularly in relation to Australia and the Pacific.

Museum of Applied Arts and Sciences, Sydney. This museum, with branches at Bathurst, Goulburn and Broken Hill, New South Wales, is administered by a director and a board of seven trustees appointed by the Governor of New South Wales. The museum specialises in applied arts (ceramics, glass, oriental arts, costumes, musical instruments, furniture, etc.), applied science and technology (engineering, transport, textiles, electronics, etc.), and among its special features are a Watt beam engine of 1785, No. 1 New South Wales locomotive, Lawrence Hargrave models, colour television, and a planetarium.

Geological and Mining Museum, Sydney. This museum is administered as a branch of the Department of Mines by a curator under the control of the Government Geologist. It is the only one in Australia devoted solely to geology and mining. The display contains a unique collection of ores and economic minerals from New South Wales with material from the other States and from overseas for comparison. Its most important functions are the identification of mineral and rock specimens, several thousands of which are received annually, and the supply of some 20,000 to 30,000 specimens free of charge to schools.

Art Gallery of New South Wales, Sydney. The Gallery originated in the Academy of Art founded in 1871. It is administered by a director and secretary under a board of thirteen trustees responsible to the New South Wales Minister for Education. The gallery has 7,957 exhibits, including 1,664 oils and 161 pieces of sculpture. Australian art in all aspects (except early colonial and native) and modern European painting and sculpture are featured. An Aboriginal art collection includes a unique set of large Melville Island graveposts. Assistance is provided to governments and private organisations in the design of books, coins, notes, etc., the preparation and judging of exhibitions, and the supply of research material and information.

Victoria

National Museum of Victoria, Melbourne. The museum was founded in 1854. It is administered by a director and board of seven trustees. It houses substantial collections in the fields of zoology, geology and anthropology. There is a small branch at Tidal River, Victoria.

Institute of Applied Science of Victoria, Melbourne. The Institute was founded in 1870. It is administered by a director and board of seven trustees. Its collections are concerned with aspects of application of all science subjects, but with special emphasis on transport, astronomy, public health, arms, agriculture, and electronics. A planetarium was opened in December 1965.

National Gallery of Victoria, Melbourne. The gallery is administered by a director and board of seven trustees. Its large collections of over 20,000 items feature paintings by Rembrandt, Tiepolo and the Flemish primitives, Dürer engravings, Blake drawings, and English 18th century furniture.

Queensland

Queensland Museum, Brisbane. The Museum, founded in 1855, is the State museum of natural science. It is administered by a director as a sub-department of the Queensland Department of Education. The collections are in the fields of the natural sciences, ethnology and history, and include extensive collections of fossil vertebrates.

Queensland Art Gallery, Brisbane. This gallery was established in 1895. It is administered by a director and board of thirteen trustees. The gallery especially features Australian art of all periods, British modern art, French sculpture, and French paintings from the Rubin collection. The Art Gallery has 1,790 display items, including 559 oils.

South Australia

The South Australian Museum, Adelaide. The museum is a department of the South Australian Public Service and is administered by a director and board of five trustees. It features natural science and anthropological collections. The latter refer to the Australasian and Pacific regions and include an outstanding collection of Aboriginal artefacts.

National Gallery of South Australia, Adelaide. The gallery originated in 1881. It is administered by a director and board of seven trustees. Apart from the usual art gallery collections, devoted chiefly to British and Australian works, it features a large collection of prints containing examples from European, British, Oriental, and Australian schools, and a numismatic collection which is widely regarded as the finest in Australia. It also contains the South Australian Historical collection and a small collection of weapons. It has 56,626 exhibits, including 2,084 oils and water-colours, and 12,029 engravings and prints.

Western Australia

Western Australian Museum, Perth. The museum was established in 1895. It is administered by a director and board of five trustees appointed by the Western Australian Government. The zoological collections cover all vertebrate and most invertebrate fields, particularly marine. There are collections relating to vertebrate palaeontology and meteorites, fossil invertebrates, and some fossil plants. There are extensive collections of Aboriginal artefacts and European arms and armour.

The Western Australian Art Gallery, Perth. The gallery was established in 1895 and is administered by a director and government-appointed board of five trustees. It features especially collections of Australian paintings, drawings, ceramics and sculpture, a fine collection of Australian contemporary art, and a major Henry Moore sculpture. It has collections of coins and of Western Australian stamps. Altogether there are 3,444 items, including 444 oils and 43 pieces of sculpture.

Tasmania

Tasmanian Museum and Art Gallery, Hobart. Opened in 1887, the Tasmanian Museum and Art Gallery is administered by a board of trustees. It has a branch at Zeehan, namely The West Coast Pioneers' Memorial Museum. The museum part contains zoological, anthropological and geological displays relating to Tasmania. The art displays contain an excellent holding of Tasmanian historical works.

Queen Victoria Museum and Art Gallery, Launceston. This institution, opened in 1891, is owned and administered by the Launceston City Council through a director and a sub-committee of aldermen. It has a branch at Cradle Mountain. Attention is concentrated on collections relating to the natural, biological and historical environment of Tasmania, featuring Tasmanian fauna, Aboriginal relics and historical material. The arts associated with Tasmania are represented by an excellent collection of early colonial period painting and also by a fine collection of costumes, lace and ceramics.

Other museums and art galleries

A short description of some of the twenty-nine remaining museums and art galleries is given in the following paragraphs. The institutions are grouped into those owned by the States, by municipalities and private trusts, by universities, and by private persons.

State-owned institutions. The Dixson and Mitchell Libraries (sections of the Public Library of New South Wales) have galleries in which paintings, drawings, engravings, photographs, coins and postage stamps, all related to Australian and south-west Pacific history, are exhibited. The main area of display comprises 7,051 square feet. Only a fraction of the many thousands of items can be shown. There is a geological museum, maintained by the Victorian State Mines Department, with a comprehensive collection of geological specimens. In South Australia there is a small museum of local and tourist interest—the Old Government House, Belair, displaying furniture, etc. of the colonial era.

Municipal and private trust institutions. In 1966 there were eleven institutions owned by various non-metropolitan municipalities throughout Australia. These range from the Mildura Art Centre with expenditure of more than \$275,000 in 1966, to the Fred and Lucy Gould collection of 319 paintings, drawings and antiques at Toowoomba. Similar institutions are often maintained in major provincial cities by private trusts. These and the municipal institutions often exhibit artistic, historical and other items of special local interest, and as a rule there are associated with them various local societies devoted to the exploration and encouragement of the arts, local history and the like. Thus the Lionel Lindsay Art Gallery and Library at Toowoomba, Queensland, is administered by a board of trustees, originally appointed in 1959 by deed of trust.

University institutions. Most university collections, some of them comprehensive and containing unique material, are reserved essentially for the use of students and research workers, and are therefore not included as museums or art galleries. However, the John Darnell Art Gallery of the University of Queensland, originating from a bequest in 1930, the Macleay Museum of Natural History at the University of Sydney, stemming from a gift to the university in 1888, and the Nicholson Museum of Antiquities at the University of Sydney are open to the public.

Private museums and art galleries. Only four establishments of this nature are included here as museums or art galleries. All of them are in South Australia.

Botanical and zoological gardens

In addition to the zoological gardens referred to in the following paragraphs there are numerous privately owned zoos and sanctuaries, many of them at tourist resorts, which maintain collections of Australian flora and fauna. There are also various national parks, forests, reserves, etc., dedicated for public use, which are preserved largely in their natural condition.

New South Wales

The Sydney Botanic Gardens are situated on the shores of Farm Cove, Sydney Harbour, close to the heart of the city and on the site of the first farm established in 1788 by Governor Phillip. Now occupying sixty-six acres, they contain a large and varied collection of flowering plants, shrubs and trees as well as hothouses of orchids and ferns.

The Zoological Gardens at Taronga Park, on the northern side of Sydney Harbour, were opened in 1916. The area is about seventy acres. The natural formation has been retained as far as practicable, with the object of displaying the animals in natural surroundings, and an aquarium has been built within the gardens. In 1965-66 admissions to the grounds were 810,685 and to the aquarium 270,464. The receipts of the zoological department of the Taronga Park Trust amounted to \$439,542 in 1965-66, excluding an annual State grant of \$1,620, and expenditure amounted to \$430,687. Exhibits at 30 June 1966 comprised 1,276 mammals, 3,112 birds, 207 reptiles, and 795 fish.

Victoria

The main botanical gardens in the State are the Royal Botanic Gardens, an area of eighty-eight acres within one mile of the centre of the City of Melbourne, containing over 12,000 species of plants, of which there are some 30,000 individual specimens. Many species of native birds breed on islands in lakes within the gardens.

The Zoological Gardens are situated in Royal Park, and contain a wide selection of animals, birds and reptiles. A wild life sanctuary is also maintained at Healesville and contains specimens of indigenous fauna.

Queensland

Botanical gardens have been established in Brisbane and in several other cities. The Brisbane Botanic Gardens were established in 1855 by the Government of New South Wales. In 1925 the Queensland Government transferred them to the Brisbane City Council. They occupy approximately forty-six acres on the banks of the Brisbane River in the central city area and are noted for their collections of palms, tropical trees and shrubs, and succulents; they contain over 7,500 plants.

South Australia

The Botanic Garden, established in 1855, was opened to the public in 1857. It contains 45 acres of tropical and sub-tropical trees, shrubs and plants, a large range of glasshouses, and a rockery with cacti and succulents. Adjoining is the Botanic Park of 75 acres, which is treated as an arboretum.

The Zoological Gardens, opened in 1883, have an area of approximately 19 acres, and contain a fine collection of animals, reptiles and birds. There were approximately 330,000 visitors in 1965-66.

Western Australia

A botanic garden for the native plants of Western Australia was officially inaugurated in March 1963, and planting of the garden began in May 1963. More than one thousand species of native plants have been established in a natural bushland setting with access by grass paths, and

there is a central water garden feature. It was officially opened in October 1965. The site of 25 acres selected for garden development during the first five years is in King's Park, a reserve of almost 1,000 acres close to the centre of Perth. In June 1962 an arboretum of 35 acres was founded for the collection of native trees, and, with the exception of some rare mallees, nearly all trees native to the southern part of the State are represented.

The Zoological Gardens, which were opened in 1898 at South Perth, have an area of 46 acres and are under the control of the Acclimatisation Committee. Animals, birds and reptiles are exhibited. During the year 1965-66, 140,293 adults and 133,317 children visited the zoo.

Tasmania

The Hobart Botanical Gardens adjoining Government House on the Queen's Domain contain a fine collection of exotic trees and shrubs. They are controlled by a board appointed by the State Government, which supports the gardens by annual grants.

There is no zoo in Tasmania, but a small collection of animals and birds is maintained by the Launceston City Council at the City Park.

Northern Territory

The Darwin Botanical Gardens were established in 1873 and were planted with imported exotic plants and trees. The gardens now occupy eighty acres and feature tropical plants of both native and overseas origin. They are controlled by the Darwin City Council.

Book publishing

Australian book publishing

Statistical data relating to Australian book publishing are supplied by the National Library of Australia as part of its bibliographical responsibilities (*see* page 629). Through the deposit provisions of the *Copyright Act* 1912-1966, its overseas collection agents and its own efforts, the library receives practically all Australian publications, although not necessarily in the year of publication. Because the statistics compiled and shown hereunder are classified according to the year of publication, the figures are subject to revision as publications not yet received in the National Library come to hand.

For books published in 1961 and thereafter the method of counting conforms with international practice. Each title is counted as one unit. The figures cover all non-periodical publications (i.e. those published at irregular intervals or regularly at intervals of one year or longer) published in Australia. They refer to all publications of five pages or more and include pamphlets, new translations and re-editions. They include government publications, educational textbooks, university theses, etc., but exclude publications not available to the general public, advertising material, publications of transitory interest, off-prints, musical works, children's picture books, and maps and charts.

Number of publications

The following table shows the number of books, etc. published in Australia during the years 1962 to 1966 received by the National Library to the end of 1966.

NUMBER OF PUBLICATIONS RECEIVED BY THE NATIONAL LIBRARY
AUSTRALIA, 1962 TO 1966

Received by the National Library to the end of—	Published during—				
	1962	1963	1964	1965	1966
1962	1,793	..	..	..	..
1963	2,501	1,416	..	..	..
1964	2,675	2,167	1,385	..	..
1965	2,700	2,312	1,934	2,039	..
1966	2,700	(a) 2,312	2,117	3,180	1,712

(a) A small number of 1963 publications are shown in later years.

The next table shows the 1963 to 1966 publications received up to the end of 1966, classified by subject matter.

NUMBER OF 1963 TO 1966 PUBLICATIONS RECEIVED BY THE NATIONAL LIBRARY, BY SUBJECT(a): AUSTRALIA, TO 1966

Subject	Published during—			
	1963	1964	1965	1966
Bibliography, libraries, general	61	42	101	64
Philosophy, psychology	17	18	23	10
Religion	79	77	110	33
Social sciences	708	775	1,207	666
Philology	33	32	43	42
Science	223	212	284	142
Technology, business	517	426	566	234
Art, amusement	110	115	116	92
Literature	323	258	440	266
Australian poetry	47	33	28	29
Australian drama	4	22	5	3
Australian fiction	180	156	235	143
Australian essays	4	4	2	3
Australian humour and miscellany	10	3	12	6
Criticisms, anthologies, school editions	45	20	137	27
Other literature	33	20	21	55
Travel, biography, history	241	162	290	163
Total	2,312	2,117	3,180	1,712

(a) The classification is based on the divisions of the Dewey Decimal Classification.

Commonwealth Literary Fund

In 1908 the Commonwealth Government, under Alfred Deakin, first established the Commonwealth Literary Fund. The Fund was entirely a compassionate one devoted to literary pensions for aged or infirm authors, for the families of literary men who died in poverty, and for writers who were unable for financial reasons to continue their activities.

In 1939, in an endeavour to encourage the development of Australian literature and to foster appreciation of it, the Commonwealth Government greatly enlarged the scope of the Fund. The Fund now awards fellowships each year, assists in the publication of manuscripts of high literary merit, makes annual grants for lectures in Australian literature, and awards pensions to writers who have achieved a nation-wide reputation for their work in the field of creative literature. The fellowships are awarded each year to writers who have proved their capacity in the field of creative literature, to enable them to devote their time to working on a literary project they specify. A fellowship carries a maximum value of \$4,000 a year. The Fund does not seek out people on whom to bestow fellowships, but considers only those who submit applications.

The Fund also assists in the publication of manuscripts which have outstanding literary merit, but which, in the opinion of publishers, may constitute a commercial risk. This assistance takes the form of a guarantee of assistance to the publisher. The Fund does not itself enter the field of publishing, nor does it make outright grants to authors to enable them to arrange publication.

From 1940 to 1965 the Fund made grants to universities for special lectures in Australian literature. In 1940, with rare exceptions, universities ignored Australian writing, but by 1964 the majority of them were actively engaged in its study, and Australian literature had become an accepted field of university scholarship. The Commonwealth Literary Fund lectures played an important role in stimulating interest in Australian literature. At present universities may apply for a grant to enable lectures to be given on special occasions.

In 1956 the Fund initiated a scheme of lectures to the general public and to schools, mainly in country areas, with the co-operation of State adult education authorities and Education Departments. All States receive grants for this purpose. The Fund also assists certain literary magazines of recognised literary value.

The Fund is administered by a committee consisting of one representative of each of the three main political parties in the Parliament, the chairman being nominated by the Prime Minister. The committee is advised on all literary matters by an advisory board of six persons with literary qualifications.

Literature Censorship Board

In 1937 the Commonwealth Government introduced legislation to provide for a literature censorship board to advise the Minister for Customs and Excise on imported literature. At the same time an appeal censor was appointed to afford appellants an avenue of appeal which did not make expensive court proceedings necessary. The appeal censor was replaced by an appeal board in 1960. The Literature Censorship Board consists of a chairman, a deputy chairman, and four other members, while the Appeal Board is made up of a chairman and two other members.

The boards were set up to deal with that part of the problem which provides the greatest amount of controversy—restriction on books which have a real place in the field of literature. In practice, no imported publication having literary merit is prohibited without prior reference to the Literature Censorship Board. Should the Minister decide to prohibit the importation of a book on the recommendation of the Board, an appeal against the decision may be made for reference to the Literature Censorship Appeal Board. A decision to prohibit the importation of a book may be challenged through the normal processes of law. Control of indigenous matter comes under the jurisdiction of the State Governments.

Film production

Australian film production

Australia was one of the pioneers in the history of film-making, *Soldiers of the Cross*, a multi-reel story film, having been made in 1900, three years before America's *The Great Train Robbery*, which is generally considered to be the first genuine story-film. It has been claimed that *The Kelly Gang*, made in 1905–6, was the first full-length feature film produced in the world. Following the outbreak of the 1914–18 War a series of short patriotic films were produced. In 1917 the first of a successful series of rural comedies was made, featuring a family called the Hayseeds. In the same year *The Kelly Gang* was remade and the first film version of *For the Term of his Natural Life* appeared. A first film version of C. J. Dennis's *The Sentimental Bloke* was made in 1919.

The year 1920 was notable for a number of productions with an authentic Australian flavour: *On our Selection*, a first version of *Robbery Under Arms*, another remake of *The Kelly Gang*, and C. J. Dennis's *Ginger Mick*. Production continued at about the same level until the coming of sound in 1928. Altogether, approximately 255 theatrical films were produced by Australian units in the silent period (1900–1930). Lack of equipment hampered the commencement of production of sound films in Australia, but during the 1930's nearly 60 sound films were produced.

During the 1939–45 War, commercial film production combined with the Commonwealth Government in making films. Since the war, a number of British and American companies have made films in Australia. Altogether, about 131 feature films were produced in Australia between 1930 and 1966.

Australian National Film Board

The Australian National Film Board was inaugurated in April 1945, on the recommendation of a Commonwealth Government inter-departmental committee. It was attached for administrative purposes to the Department of Information. With the abolition of that Department in March 1950, administration of the Board was transferred to the News and Information Bureau, Department of the Interior.

In November 1950 the Board was reconstituted as an advisory body to the Minister for the Interior on matters concerned with the production, acquisition and distribution of films required by Commonwealth departments for use within Australia on important matters of national interest and welfare, such as school and adult education, rehabilitation, social development, international understanding, trade and tourist expansion, and immigration; and for dissemination abroad to expand trade and commerce with other countries, to encourage tourist traffic with Australia, to improve Australia's relations with other countries and, where necessary, to explain Australia's national policies, and to encourage immigration.

The constitution provides for a membership of twelve, with the Director of the News and Information Bureau as chairman and the remainder representative of Commonwealth departments, State government instrumentalities, and organisations interested in the production, distribution or utilisation of films for national publicity.

Film Division of the News and Information Bureau

Official government film production originated with the appointment in May 1913 of a cinematographer and photographer in the Department of External Affairs. A later development was the establishment, in Melbourne in 1920, of the Cinema and Photographic Branch of the Department of Commerce, and a Government film unit has existed in one form or another to

the present day. Early in the 1939-45 War the newly-established Department of Information was made responsible for the operation of the Cinema Branch and for an Official War Photography Unit. When the Australian National Film Board was established in 1945, the Film Division of the Department of Information became the official film production and distribution agency for Commonwealth departments and instrumentalities. In 1950, with the closing down of the Department of Information and the transfer of its functions, the Division became the Film Division of the News and Information Bureau then set up within the Department of the Interior. The Film Division is also known as the Commonwealth Film Unit. Theatrical and television distribution in Australia, and both theatrical and non-theatrical distribution overseas, of all Film Division productions are organised by the Bureau's home office or its overseas representatives. Non-theatrical distribution in Australia is organised through the National Library, Canberra, in co-operation with State film distribution agencies.

Since 1946 the Film Division has produced films for general exhibition, as well as training and special purpose films. In 1965-66 the Film Unit produced approximately 100 reels of new films and 82 reels of foreign versions of existing films. Prints are distributed through 70 overseas embassies and diplomatic posts. While many films are released commercially in Britain, the emphasis is on distribution of educational and information films through non-theatrical circuits. Films are frequently shown on television both in Britain and continental Europe. A similar situation exists in the U.S.A., where there is wide non-theatrical distribution and considerable use of the films by television networks. In Canada the Australian High Commission handles the placement of films for non-theatrical use, while a recently completed contract with the Canadian Broadcasting Corporation has resulted in a considerable increase in the number of Australian films appearing on television in Canada. Selected films have been recorded in French, Dutch, German, Italian, Swedish, Russian, Spanish, Japanese, Malay, Thai, Danish, Greek, Portuguese, Esperanto, and Pidgin.

In addition to films made on its own initiative, the Film Division produces films under the sponsorship of, or with the co-operation of, Commonwealth departments and many other bodies such as the Australian Road Safety Council, the Snowy Mountains Hydro-electric Authority, the Australian National University, the Australian Broadcasting Commission, the Victorian State Electricity Commission, the National Capital Development Commission, the Atomic Energy Commission, the British Broadcasting Corporation, the Australian National Shipping Line, and the Institute of Aboriginal Studies.

Film censorship

Legislation. The Commonwealth Government's powers over censorship of films extend only to imported films and imported advertising matter, and stem from the Customs Act. Under that Act the Customs (Cinematograph Films) Regulations provide for the appointment of a Film Censorship Board whose function is to ensure that films and related advertising material coming within certain defined categories are not admitted into Australia. Under those regulations the Film Censorship Board may pass films in their original form, reject them, or pass them after eliminations have been made. Legislation passed by the State Governments of Victoria, Queensland, Western Australia, and Tasmania names the Commonwealth Film Censorship Board as the censorship authority and vests in it the power to classify films as suitable for general exhibition or not. The State Acts give the Commonwealth Board the authority to censor films made in Australia for commercial exhibition and advertising matter made in Australia.

The censorship organisation comprises a Censorship Board of seven persons and an Appeal Censor, the headquarters being in Sydney. Importers have a right of appeal to the Minister against decisions of the Board and the Appeal Censor.

Thirty-five mm films for exhibition in motion picture theatres. In 1966, 1,388 films comprising approximately 5½ million feet were censored. This represented approximately 1,030 hours screening time. Of these films, 379 originated in the United States of America, 371 in the United Kingdom, and 638* in other countries. Principal suppliers among the last mentioned were: Italy, 117; Greece, 81; France, 67; U.S.S.R., 58; Germany, 34; and Poland, 22. Included in these figures were 554 full-length feature films which constitute the main theatrical attractions. This was an increase of 119 over imports for 1965. Feature films came from: the United States of America, 140; the United Kingdom, 74; Italy, 107; Greece, 76; France, 39; U.S.S.R., 36; Germany, 11; and Sweden, 9. Twenty-four feature films were initially rejected and cuts were made from 131. Two rejected feature films were subsequently reconstructed and passed, and one was passed on appeal. There were 6 appeals, 1 against cuts, which was allowed, and 5 against rejection, of which 4 were disallowed and 1 allowed. Feature films classified as suitable for general exhibition numbered 253, and 277 were considered not suitable for children. Of the latter, 53 carried the special condition that all advertising should indicate that they were suitable only for adults. These classifications are advisory only and are designed to enable picture-goers and particularly parents to obtain a general idea of the nature of any particular film. In addition to these imported films, 166 35mm films of 174,132 feet produced in Australia were cleared. These were mainly newsreels and documentaries intended for commercial exhibition or export.

* Includes 76 Australian-produced films.

Sixteen mm films. Excluding those imported for television use, 6,439 16mm films of approximately 4½ million feet were examined. These were films commercially produced for screening in theatres used by business undertakings for advertising and instructional purposes, and for screening in churches, schools and universities, and on home movies. One was rejected.

Eight mm and 9.5mm films. Approximately 103,000 feet of these small dimension type films were examined. One hundred and sixty-three films with an approximate footage of 12,000 feet were rejected.

Television films. In 1966, 7,555 films, predominantly 16mm, of approximately 9 million feet, for use on television, were censored. The number of films is not a true indication of volume because many of these were of short duration. In terms of screening time the films censored for television amounted to approximately 4,293 hours. On a footage basis the United States of America supplied 68 per cent of the total imports and the United Kingdom 31 per cent. Sixty-six television films were rejected outright and an additional 1 was classified as unsuitable for televising. Eliminations were made from 1,057. There were 24 appeals, 22 against rejection, 2 against classification, of which 9 were allowed and 15 disallowed.

Foreign language films. Countries other than the United Kingdom and the United States of America supplied 562 of the 35mm films imported for theatrical exhibition, of which 340 were feature films. Generally, the dialogue is in a foreign language with explanatory English captions. A few have an English commentary and in some cases English 'dubbed' dialogue. Of 6,439 16mm commercial films censored, 1,465 originated from non-English speaking countries. The chief supplying countries were: France, 286; Germany, 235; Japan, 167; Poland, 103; Holland, 81; Switzerland, 50; Sweden, 48; Italy, 42; China, 33; U.S.S.R., 32.

Export of films. The quantity of films exported for the year was approximately 2.5 million feet, consisting mainly of newsreels, advertising films and documentaries. This footage included in many cases several prints of the one film. It also included large quantities of exposed negatives sent overseas for processing.

Arts Council of Australia

Patterned on the Council for the Encouragement of Music and Arts which operated in the United Kingdom during the Second World War, an Australian organisation was brought into being in 1943. In 1945 it became The Arts Council of Australia. Originating in New South Wales, Divisions are active now in the Australian Capital Territory, New South Wales, Queensland, South Australia, and Tasmania. A Federal Council was formed in 1964. New South Wales has a country branch network of over fifty centres. Rapid development in Queensland has resulted in the formation of over twenty-six branches.

The Arts Council receives State Government grants through the Departments of Education in New South Wales, Queensland and South Australia. From 1963 to 1966 substantial contributions were received from a private organisation. Some activities of the Council are supported financially by non-metropolitan local government bodies, and grants were made by the Gulbenkian Foundation in 1964 to 1966 to help in re-establishing the Federal Council. The New South Wales Division is a member of the Adult Education Advisory Board in that State, representing the 'live art' section of adult education. The Tasmanian Division is represented on, and works closely with, the Adult Education Board of that State.

Activities of the Arts Council are directed towards decentralisation of the arts for the benefit of country centres and metropolitan and country schools. It is greatly concerned with taking the arts to children as a basic cultural development. Tours of high standard companies in opera, ballet, drama, puppets, etc. are operating throughout the year. The Young Elizabethan Players Company was formed jointly by the Arts Council and the Australian Elizabethan Theatre Trust in 1958 to take Shakespeare to schools in New South Wales and Queensland. This has now been replaced by the Young Tote Company sponsored by the Arts Council and the University of New South Wales Drama Foundation. The Council handles a wide range of art exhibitions, both for city and country areas. Summer schools for drama, painting, pottery, music, and other arts are an established annual feature of the work of the New South Wales and Queensland Divisions.

Yearly drama festivals are conducted for the Little Theatre movement. In 1963 and again in 1965 the New South Wales Division sponsored the first arts festivals for Sydney (North Side Arts Festival), with a wide range of cultural activities concentrated on the north side of Sydney Harbour. The festival is now a biennial event with the third festival being planned for August 1967.

Australian Elizabethan Theatre Trust

Inaugurated in 1954 to commemorate the first visit to the Commonwealth of Her Majesty the Queen, the Australian Elizabethan Theatre Trust has since presented drama, opera, ballet and puppetry throughout the Commonwealth. The Trust receives annual grants from the Commonwealth Government, the State Governments and city councils. Its income also includes subscriptions from members and donations from business houses.

In the field of drama it has presented, *inter alia*, the works of Australian playwrights, including plays which were subsequently presented overseas. The Elizabethan Trust Opera Company has given seasons of opera and has presented overseas guest artists, conductors and producers. From 1956 to the end of 1966, more than 1,200 performances of opera have been given by the Trust Opera Company in all States and the Australian Capital Territory. Twenty-eight operas have been the repertoire in this period. The Australian Ballet, which commenced its inaugural season in November 1962, has visited all mainland capitals and New Zealand and presented world premiere productions of three commissioned ballets during 1964. The Commonwealth Government gave financial assistance for the Ballet to represent Australia at the Commonwealth Festival of Arts in Britain in 1965. The company also danced at Baalbek, Nice, Paris, Berlin, Copenhagen, and Honolulu. It will tour New Zealand, Canada and major Latin American cities during 1967. The Trust has also been associated with commercial managements in the presentation of overseas attractions and large-scale musicals.

In 1965 the Trust and Arts Council of Australia jointly formed the Marionette Theatre of Australia to promote puppetry, and one puppet company with sponsorship from the Department of External Affairs began a twelve-nation tour of Asia late in 1966.

Country areas have been visited by Trust companies presenting opera, drama, ballet, and puppetry, in association with the Council of Adult Education in Victoria and the Arts Council of Australia. During 1967 five special companies will present Shakespeare and other curricular plays for schools in all States, this being an extension of similar work undertaken annually since 1958.

In Victoria the Trust is associated with the University of Melbourne in the Union Theatre Repertory Company. It is also associated with the University of New South Wales Drama Foundation in the Old Tote Theatre Company. The corresponding activity in Adelaide, the South Australian Theatre Company, was introduced by the Trust in 1965. Assistance is given to the Adelaide Festival of Arts, the Festival of Perth, the Perth Playhouse, the National Theatre and Fine Arts Society of Tasmania, and other companies. From a special commissioning fund the Trust commissions theatrical works in all major forms from Australian creative artists.

An important activity of the Trust is its association with the University of New South Wales and the Australian Broadcasting Commission in maintaining the National Institute of Dramatic Art, which they jointly established. This provides a training ground for young Australian actors, producers and technicians. Performing a similar function for selected ballet students, the Australian Ballet School is maintained by the Trust in Melbourne.

The Australian Council of National Trusts

The Australian National Trusts were founded to further the general objectives of preservation and conservation of lands, places, buildings, works, and articles which are of national importance by reason of educational, historic, architectural, artistic, scientific, cultural, or other special interest, and places of natural beauty, including conservation of their flora and fauna.

The first Australian National Trust, the National Trust of Australia (New South Wales), was formed in 1945. Since then National Trusts have been formed in each of the other States. The Trusts in New South Wales, Queensland, South Australia, and Western Australia have statutory authority, and those in Victoria and Tasmania are incorporated under the Companies Acts of their respective States. The Australian Council of National Trusts, which was incorporated in 1965 to co-ordinate the activities of the State National Trusts and represent them at the federal level and internationally, has associations with the National Trusts in Great Britain and the United States of America.

Membership of the National Trusts is open to all individuals and organisations. Total membership throughout the Commonwealth is approximately 18,000. The Trusts are financed by members' subscriptions, the sponsorship of commercial and industrial organisations, the State Governments, and the Commonwealth Government. A total of approximately \$40,000 was received from entrance fees to National Trust properties throughout Australia during 1966-67.

The number of properties owned or controlled by the Trusts exceeds fifty. These include houses, natural reserves, a garden, a powder magazine, a police station, and a paddler streamer. About thirty other buildings have been classified by the National Trusts as being of outstanding interest, but are not owned or controlled by the Trusts. The Tasmanian Government has agreed to make available to the National Trust of Australia (Tasmania) a total of \$60,000 over a period of five years as a contribution towards the restoration of Clavendon, a country mansion near Evandale.

Historic Memorials Committee

The Historic Memorials Committee was established in 1911 for the purpose of securing portraits of distinguished Australians who had taken an active part in Federation. Later the Committee decided to obtain portraits of all Governors-General, Prime Ministers, Presidents of the Senate, Speakers of the House of Representatives, and other notable Australians. In addition the Committee may commission, and has in fact commissioned, paintings recording special events connected with the Commonwealth Parliament.

The Committee comprises the Prime Minister (Chairman), the President of the Senate, the Speaker of the House of Representatives, the Vice-President of the Executive Council, the Leader of the Opposition, and the Leader of the Opposition in the Senate. An Art Advisory Board, comprising a group of artists, was established in 1912 to assist the Committee by advising on works of art to be commissioned by the Committee.

Commonwealth Art Advisory Board

Since its beginning in 1912 the Art Advisory Board has always consisted of artists. At present there are five members. As well as assisting the Historic Memorials Committee the Board also advises the Government on the purchase of works of art for inclusion in the National Collection. In 1966-67, \$50,000 was provided for this purpose. The National Collection now contains over 1,200 works of art.

The Board, on behalf of the Government, also organises and finances exhibitions of Australian art in overseas countries. In addition, it financially assists the showing in State Art Galleries of major exhibitions from abroad or assembled by one or more State Art Galleries. In 1966-67, \$12,000 was provided to meet the costs involved in these exhibitions.

SCIENTIFIC RESEARCH

A special article on Science and Technology in Australia, prepared by the Commonwealth Scientific and Industrial Research Organization of Australia, was included in Year Book No. 49 (see page 781).

Outline of Research in Australia

Scientific research in Australia prior to the 1939-45 War

Interest in science goes back to the beginning of Australian history. Captain James Cook discovered the east coast of Australia when returning from a scientific expedition to the South Pacific, and one of his passengers was the President of the Royal Society, Sir Joseph Banks, who was the first of many naturalists to be fascinated by the unique flora and fauna of the continent. The Stone Age culture of the Aborigines drew the early attention of anthropologists. The Aboriginal boomerang was a source of interest to the Surveyor-General of New South Wales, Sir Thomas Mitchell, who attempted to apply its spinning characteristics in a 'boomerang propellor' for driving steamships.

Until the 1914-18 War Australian science rested on the individual accomplishments of a few outstanding men, working largely in isolation. Three names stand out in this period—Farrer, Hargrave and Mitchell. After years of patient work as a plant breeder, Farrer developed the first successful strain of rust-resistant wheat. Hargrave's experiments in aviation attracted world-wide attention. Mitchell, a hydraulic engineer, invented a thrust bearing which made it possible to increase greatly the motive power of ocean-going screw steamships.

During the first world war Australia followed the British example and set up, in 1916, the Commonwealth Advisory Council for Science and Industry which finally became the Commonwealth Scientific and Industrial Research Organization (C.S.I.R.O.). The Munitions Supply Laboratories formed in 1916 under the Ministry of Defence provided scientific services and undertook development tasks related to the supply of military material. Between the two world wars most of the systematic research done in Australia was carried out in the Council's laboratories. A little was done by some State departments of agriculture, but very little in the universities, which had not yet come to be regarded as research centres. Many of the most able Australian scientists were attracted to posts abroad.

Scientific research during and following the 1939-45 War

The situation changed with the onset of the 1939-45 War and the economic expansion which followed it. Until 1939 the activities of the Council for Scientific and Industrial Research had been concentrated in the biological sciences, stimulated by the needs of primary industry. With the war C.S.I.R.'s work expanded greatly and spread into the physical sciences, with particular attention to the technical problems of industrial production. Many products previously

imported, such as drugs and precision instruments, had to be manufactured locally, and much research and developmental work was necessary before this could be done. The work was carried out by C.S.I.R., by the Department of Supply, by university science departments, and by industrial firms. These wartime activities had permanent effects, particularly in the universities and in C.S.I.R.

As the following paragraphs indicate, Australian research continued to expand after the war, with the Commonwealth Government taking a significant role both in its own research activities and in furthering research in general. The establishment in December 1966 of the Commonwealth Department of Education and Science indicates the importance placed on research by the Federal authorities. There is no section of non-government research (universities, independent research institutions, industrial research, and individual research, workers) for which Government support is not now provided, although some of the schemes are as yet in their infancy.

Australian National University and other university research

In 1946 the Commonwealth Government established the Australian National University, whose statutory functions required it to 'encourage and provide facilities for post-graduate research and study, both generally and in relation to subjects of national importance to Australia'. The University's Institute of Advanced Studies is devoted to research and post-graduate training. The Institute comprises the John Curtin School of Medical Research and the Research Schools of Physical Sciences, Social Sciences, Pacific Studies, and Chemistry. The research activities of a teaching university are carried out in the University's School of General Studies. The growth of the National University, with its major emphasis on research and post-graduate training, introduced a new influence on the university scene which, apart from its own research activities, has provided an important stimulus, indirectly, for the growth of research in other universities. This was made financially possible by increased grants from the Commonwealth. Until 1936 only small *ad hoc* research grants had been made to the universities. In 1936 a five-year programme was inaugurated by which \$60,000 was spent annually on grants for research in the physical and biological sciences. This figure had grown to \$200,000 in 1950, after which the amount was absorbed in the new system of Commonwealth grants to the States for university purposes. In 1957 the report of the Committee on Australian Universities (the Murray Report) recommended increases in research funds and drew attention to the small number of post-graduate students. A further increase was approved in 1963, following the second report of the Australian Universities Commission. In 1965 the Commonwealth established the Australian Research Grants Committee to recommend and administer grants for individual research projects, mostly in universities. In 1964 the Commonwealth Government established the Queen Elizabeth II Fellowship Scheme for post-doctoral studies in the physical or biological sciences. Ten fellowships may be awarded annually to young scientists of exceptional promise and proved capacity for original work. The fellowships, which may be awarded to Australian or United Kingdom citizens, are tenable in an Australian university or approved research institution normally for two years.

The growth of university research is reflected in the increase of post-graduate studies. The Ph.D. degree was introduced into Australia only after the second world war, and the first such award was made by the University of Melbourne in 1948. Between 1948 and 1966 inclusive more than 1,900 Ph.D.'s were awarded in Australian universities. Some 600 higher doctoral degrees were awarded over the same period. During the year ended 31 July 1966, 336 Ph.D. degrees and 47 higher doctorates were awarded.

Research in the universities is mostly of a 'pure' or 'fundamental' character, although universities have also concerned themselves with 'applied' research directed to the solution of practical problems, e.g. in metallurgy, chemical industry, agriculture, and food processing. A recent example of co-operation between a university and a State government agency was the investigation carried out by the University of Melbourne into the production of town gas from the lignite of the Yallourn-Morwell deposits in Gippsland, Victoria. In 1959 the University of New South Wales established Unisearch Ltd., with the purpose of assisting by research and other suitable means the advancement, development and practical application of science to industry and commerce.

Research by Government agencies

The post-war growth of C.S.I.R.O. has proceeded in both pure and applied science. Although increasing attention is being paid to industrial problems, the major impact of C.S.I.R.O. activities is still in the field of primary production. Research on pasture improvement, for example, is estimated to have brought about a doubling of the high-quality pasture in the decade 1948-58, and the successful programme of rabbit control that followed C.S.I.R.O.'s work on myxomatosis brought about a notable increase in the numbers of sheep during the same period. Apart from C.S.I.R.O., the research activities of other Commonwealth agencies have grown substantially since the war. These include the Long Range Weapons Research Establishment set up in 1947 under an agreement with the Government of the United Kingdom and reorganised in 1955 as

the Weapons Research Establishment; the Munitions Supply Laboratories, later renamed the Defence Standards Laboratories; and the C.S.I.R.O.'s Division of Aeronautics which was transferred to the Department of Supply and renamed the Aeronautical Research Laboratories. (Details of the research activities of these establishments are given in Chapter 4, Defence, pages 86-8.) In 1954 the Atomic Energy Commission decided to set up its own research establishment at Lucas Heights, near Sydney. The Royal Australian Navy also maintains an experimental laboratory. Other agencies engaged in research include the Bureau of Meteorology, the Ionospheric Prediction Service and the Bureau of Mineral Resources, Geology and Geophysics. Attached to the Commonwealth Health Department are several institutions doing research work, e.g. the Commonwealth Serum Laboratories, The School of Public Health and Tropical Medicine, The Commonwealth Acoustic Laboratories, The Bureau of Dental Standards, The Commonwealth Health Laboratories, The National Biological Standards Laboratory, and the Commonwealth X-ray and Radium Laboratory. (Further particulars of these research establishments will be found in Chapter 16, Public Health, pages 561-6.)

Research work by State Government remains largely in the field of agriculture. In Queensland the great importance of the sugar industry is reflected in the work of the Bureau of Sugar Experiment Stations. Some co-ordination of research in agriculture is exercised through the Standing Committee on Agriculture, a joint Commonwealth-State body. In recent years some interest has also been shown in problems related to power generation, public health and water supply.

Research in industry

Research in industry has also expanded, though not at the same rate as in government agencies or the universities. Since 1955 several large firms have established their own central laboratories, and appreciable sums are being spent on research in the chemical, metals, sugar, and paper industries. To encourage this trend the Commonwealth Government has announced that it will make available a sum of \$6,000,000 a year for grants to firms willing to increase their expenditure on research and development. Special tax concessions apply to expenditure on research and development.

Research in social sciences

Research in the social sciences has developed largely since the war. Before 1939 such work was virtually confined to anthropology and economics, although educational research was carried out by the State education departments and by the Australian Council for Educational Research. The latter, which was established in 1930, is now mainly supported by Commonwealth and State financial grants. The need for a much wider scale of activity was one of the motives for the establishment of the Australian National University, with a Research School of Social Sciences and a Research School of Pacific Studies. In 1952 the Social Science Research Council was established, with support from the Carnegie Corporation and the Commonwealth Government, to encourage the advancement of the social sciences, to foster research and to subsidise the publication of studies. The Institute of Applied Economic Research, supported by private funds, was set up at the University of Melbourne in December 1962; its work ranges from the economics of industry to the economics of welfare. In 1961 the Australian National University set up the New Guinea Research Unit, based in Port Moresby, which is carrying out a range of investigations into economic and social change in the Territory of Papua and New Guinea. The first election held in the Territory in 1964 was the subject of a full-scale study. In 1961 the Commonwealth established the Australian Institute of Aboriginal Studies, for the organisation and finance of research on Aboriginal matters, largely within Australian universities. The Institute's own staff is small although its annual budget currently exceeds \$300,000. Despite these developments, the growth of research in the social sciences has been considerably slower than in the natural sciences. Its growth has, however, been stimulated by the establishment of new universities with strong interests in the social sciences, and by the increased demand for information about social changes arising from both public and private sources.

Distribution of Australian research work

Research in Australia has not, on the whole, been strongly concentrated in particular fields. Nevertheless, some fields have attracted more attention than others, either because of their special economic or social importance or because Australia offers particular facilities for pursuing them. The wool industry, mineral processing and the manufacture of paper from native hardwoods are examples of the former. The most notable example of the latter is radio-astronomy, for which Australia has special advantages because of its geographical position. The projected installation of one of the world's largest optical telescopes, to work in conjunction with radio-astronomical observations, will enable the exploitation of Australia's climatic advantages for optical astronomy. The combination will give Australia a premier position in this field of physical science. Hitherto the most notable achievements of Australian scientists have been in the biological sciences, as shown by the three Nobel Prizes won by Australians—Lord Florey for work on penicillin, Sir Macfarlane Burnet for immunology and Sir John Eccles for neuro-physiology.

Commonwealth Scientific and Industrial Research Organization

The Commonwealth Scientific and Industrial Research Organization (C.S.I.R.O.) is Australia's largest civil scientific body. Established as the Council for Scientific and Industrial Research (C.S.I.R.) in 1926, it was re-organised in 1949 under the Science and Industry Research Act and now has a staff of more than 5,500 including some 1,700 professional scientists. An account of the organisation and work of the former Council, and the earlier Commonwealth Institute of Science and Industry from which the Council was formed, was given in earlier issues of the Year Book. (See No. 14, p. 1061 and No. 37, p. 1183.)

The principal function of C.S.I.R.O. is to carry out scientific research for the primary and secondary industries of the Commonwealth and its Territories. C.S.I.R.O. does not conduct defence research, medical research or atomic energy research. The other powers and functions of C.S.I.R.O. as defined in the Science and Industry Research Act of 1949, include:

- the training of scientific research workers and the awarding of scientific research studentships and fellowships;
- the making of grants in aid of pure scientific research;
- the recognition or establishment of associations of persons engaged in any industry, for the purposes of carrying out industrial scientific research and the co-operation with, and the making of grants to, such organisations;
- the testing and standardisation of scientific apparatus and instruments and the carrying out of scientific investigation connected with standardisation;
- the collection and dissemination of information relating to scientific and technical matters;
- the publication of scientific and technical reports, periodicals and papers.

Before 1939 C.S.I.R. was engaged largely in research into problems of primary industry, in particular, plant and animal diseases and nutrition, soils, pasture improvement, insect pest control, usage of Australian timbers, food processing, and fisheries. Since 1939 an extensive programme of wool research has been developed, and research has been extended into the physical and engineering sciences with particular reference to international standards, radiophysics, various aspects of chemistry, metal physics, meteorological research, mineral processing, building research, dairy products research, engineering research, and coal utilisation.

Organisation

C.S.I.R.O. is a statutory corporation operating under its own Act of Parliament and exercising its powers subject to the regulations and the approval of the Minister for Education and Science.

The governing body of the Organization is the Executive, which consists of nine members appointed by the Governor-General. There are five full-time members, one of whom is chairman, and four part-time members. At least five of the members must possess scientific qualifications. The Executive is responsible to the Minister for the policy and the work of the Organization.

For carrying out its research work, C.S.I.R.O. is divided into four major group laboratories and a number of Divisions and Sections. The four group laboratories are the Animal Research Laboratories comprising four Divisions, the Chemical Research Laboratories comprising five Divisions, the National Standards Laboratory comprising two Divisions, and the Wool Research Laboratories comprising three Divisions. There are also seventeen independent Divisions in other research fields and an additional nine independent Sections. The Head Office is in Melbourne and associated with it are the Central Library (see pages 630-1), the Film Unit and the Translation Unit. Regional administrative offices are located at Brisbane, Canberra, Melbourne, and Sydney. The Organization also maintains the Australian Scientific Liaison Office in London and the Office of the Scientific Attaché in Washington.

Since the Organization's activities are Commonwealth-wide and often involve extensive field work, a number of branch laboratories and field stations have been established in various parts of Australia. The more important of these are included in the following lists.

Laboratories and Divisions

Animal Research Laboratories, consisting of the following four Divisions.

- Animal Genetics, Sydney, with a branch laboratory and field station at Rockhampton, Queensland, and field stations at Armidale and Badger's Creek, New South Wales, and at Cunnamulla, Queensland.
- Animal Health, Melbourne, with branch laboratories in Sydney and Brisbane, and field stations at Jimboomba, Queensland, and Werribee, Victoria.
- Animal Physiology, Sydney, with a laboratory and field station at Armidale, New South Wales, and a branch laboratory in Brisbane.
- Nutritional Biochemistry, Adelaide, with a field station at O'Halloran Hill, South Australia.

Chemical Research Laboratories, Melbourne, consisting of the following six Divisions.

- Applied Chemistry.
- Applied Mineralogy, with branch laboratories in Perth and Sydney.
- Chemical Engineering.
- Chemical Physics.
- Mineral Chemistry.
- Microanalytical Laboratory.

National Standards Laboratory, Sydney, consisting of the following two Divisions.

- Applied Physics.
- Physics, with the Solar Observatory at Culgoora, New South Wales.

Wool Research Laboratories, consisting of the following three Divisions.

- Protein Chemistry, Melbourne.
- Textile Industry, Geelong, Victoria.
- Textile Physics, Ryde, New South Wales.

The other Divisions are as follows.

- Building Research, Melbourne, with an office in Port Moresby, New Guinea.
- Coal Research, Sydney.
- Dairy Research, Melbourne.
- Entomology, Canberra, with branch laboratories in Sydney, Brisbane, Hobart, Perth, and Armidale, New South Wales, and field centres at Albury, Trangie and Wilton, New South Wales, and at Amberley, Queensland.
- Fisheries and Oceanography, Cronulla, New South Wales, with branch laboratories in Brisbane, Melbourne and Perth.
- Food Preservation, Sydney, with branch laboratories at Gosford, New South Wales, (operated jointly with the New South Wales Department of Agriculture), and in Brisbane and Hobart.
- Forest Products, Melbourne.
- Land Research, headquarters in Canberra, and field stations and laboratories at Alice Springs, Katherine and Darwin, Northern Territory, and Kununurra, Western Australia.
- Mathematical Statistics, Adelaide, with officers stationed at a number of Divisions and Sections and at the University of Melbourne.
- Mechanical Engineering, Melbourne.
- Meteorological Physics, Melbourne.
- Plant Industry, Canberra, with branch laboratories in Perth, Hobart, Brisbane, and Melbourne, and at Deniliquin and Armidale, New South Wales, field stations and experimental farms at Canberra and Deniliquin, and at Kojonup and Baker's Hill, Western Australia, and a tobacco research institute at Mareeba, Queensland.
- Radiophysics, Sydney, with the Australian National Radio Astronomy Observatory at Parkes, New South Wales, and the Radio Heliograph at Culgoora, New South Wales.
- Soils, Adelaide, with branch laboratories in Brisbane, Canberra, Perth, and Hobart, and Townsville, Queensland.
- Tribophysics, Melbourne.
- Tropical Pastures, Brisbane, with branch laboratories at Townsville and Lawes, Queensland, and field stations at Samford and Woodstock, Queensland.
- Wildlife Research, Canberra, with a branch laboratory in Perth.

Sections

- Computing Research, Canberra, with subsidiary installations at Adelaide, Melbourne and Sydney.
- Editorial and Publications, Melbourne.
- Horticultural Research, Adelaide, with a field station at Merbein, Victoria.
- Irrigation Research Laboratory, Griffith, New South Wales.
- Ore Dressing Investigations, Melbourne.
- Physical Metallurgy, Melbourne.
- Soil Mechanics, Melbourne, with a branch laboratory in Adelaide.
- Upper Atmosphere, Camden, New South Wales.
- Wheat Research Unit, Sydney.

The Organization's total budget for 1966-67 was nearly \$42,000,000. About three-quarters of this was provided by the Commonwealth Government, while much of the remainder was provided by trust funds which have been set up by various primary producer groups. The largest of these is the Wool Research Trust Fund, but the wheat, dairy, beef cattle, leather, and tobacco industries also contribute substantial amounts. The funds are derived from a levy on produce matched by a Government contribution.

Mount Stromlo and Siding Spring Observatories

Mount Stromlo Observatory and Siding Spring Observatory are the two astronomical research stations of the Research School of Physical Sciences, Australian National University. The staff of the observatories are academic staff of the University's Institute of Advanced Studies. The permanent headquarters of the observatories is located at Mount Stromlo, together with the library, laboratories and offices of the scientific staff. The older telescopes are located on Mount Stromlo, the newer ones on Siding Spring Mountain. At Siding Spring there is a lodge to house the astronomers, permanently based at Mount Stromlo, who visit for short periods to make observations there.

The observatories constitute the principal centre of optical astronomical research in the southern hemisphere. Their research facilities are second only to the great observatories of the south-western United States, and because of their geographical latitude observations can be made on parts of the sky permanently inaccessible to northern astronomers. The functions of the observatories is to carry out original investigations (both observational and theoretical) in astronomy and astrophysics, and to provide post-graduate training for the future generation of Australian astronomers.

The direction of the researches conducted depends on the steadily widening interests of the staff and scholars as the subject of astronomy itself rapidly progresses. Areas of permanent interest to which the observatories have made important contributions include the evolution of stars and of stellar systems, the study of the Magellanic clouds and their globular star clusters, the chemical composition of the stars and the study of pulsating stars. The results of the work carried out at the observatories are published in the international scientific periodicals, principally in the *Monthly Notices of the Royal Astronomical Society* and the *Astrophysical Journal*.

Mount Stromlo Observatory is situated at $35^{\circ} 19' 16''$ south latitude and 149° east longitude at an altitude of 2,560 feet. It is on the summit of a ridge of low hills in the Australian Capital Territory seven miles west of the city of Canberra. The first regular scientific work was started at this site in 1925, and the Observatory was incorporated in the Australian National University in 1957. The main instruments are 30-inch, 50-inch and 74-inch reflecting telescopes and associated spectrographs, photometers and spectral scanners.

Siding Spring Observatory was established in 1965. It is located at $31^{\circ} 16'$ south latitude and $148^{\circ} 41'$ east longitude at an altitude of 3,820 feet and occupies the summit of Siding Spring Mountain in the Warrumbungle Ranges, near Coonabarabran, New South Wales. This site has one of the best climates for astronomical research to be found anywhere in Australia—considerably better than that at Mount Stromlo. The instruments at present operating at Siding Spring Observatory include a 40-inch and a 24-inch reflector.

The observatories also operate the National Time Service whose headquarters are located at Mount Stromlo.

Australian Atomic Energy Commission

Establishment and functions of the Commission

In November 1952 a Commission of three members was appointed to control the Commonwealth's activities in relation to uranium and atomic energy, and in April 1953, upon the enactment of the *Atomic Energy Act* 1953, the Commission was established as a statutory authority with powers and functions as defined in the Act. Under amending legislation the number of Commissioners was increased to five in April 1958. The Commission is a corporate and autonomous body controlling its own service. It functions under the direction of the Minister for National Development.

The functions of the Commission fall under two main headings. Firstly, it is responsible for undertaking and encouraging the search for and mining of uranium and is empowered to co-operate with the appropriate authorities of the States in connection with these and related matters. Secondly, it is authorised to develop the practical uses of atomic energy by constructing and operating plant for this purpose, carrying out research, and generally fostering the advancement of atomic energy technology.

Uranium prospecting and mining

Production of uranium concentrate in Australia is now confined to the Rum Jungle Plant, Northern Territory. Since 1953, mining and treatment operations here have been conducted for the Commonwealth by a mining company. Mining of presently known reserves of uranium in this area was finished in 1963, but treatment of stock-piled ore has continued. Australia's own domestic requirements of uranium oxide to the end of the present century are expected to be greater than currently known reserves. Because of this the Commonwealth has continued exploration for uranium in the Rum Jungle area and has sought to encourage private producers to resume exploration.

Research

The Commission's Lucas Heights Research Establishment is Australia's atomic energy research and information centre. Its research programme is concerned with the development of nuclear power, the production and utilisation of radioisotopes, and other related fields. It is directed towards the long-term development of national resources.

The research programme over the past few years has been a technical and feasibility study of an advanced high temperature gas cooled reactor system in which the core was composed of ceramic materials—oxides of uranium, plutonium, thorium and beryllium. Carbon dioxide was considered as the coolant gas. The study has been largely concerned with fundamental research and development in the fields of reactor materials, nuclear and reactor physics, and nuclear engineering. After a detailed technical assessment of the system in 1966, the Commission concluded that it was not as attractive for base-load power stations as previously expected. The Commission has decided to taper off this study, subject to the completion of those parts of the study which are considered valuable from the point of view of scientific merit or reactor technology. The effort will be transferred largely to a technical and economic assessment of a natural uranium fuelled, heavy water moderated reactor. This type of reactor system is now considered to be most suitable for future installation in Australia for the economic production of nuclear power.

The use of radioisotopes is increasing rapidly in Australia in scientific research and development, in treatment of diseases, and in agriculture and industry generally. Most of these, especially short-lived radioisotopes which cannot be imported, are being produced in the Commission's high flux research reactor HIFAR at Lucas Heights. The A.A.E.C. is also producing the majority of cobalt 60 teletherapy sources for cancer treatment in Australia, and is exporting high activity sources to New Zealand and to Asia. The Commission is promoting research into radioisotope application and is co-operating with universities, industry and governmental bodies in making available the most up-to-date techniques involving the use of radioisotopes in every field.

Large-scale hydrological investigations using radioactive tracers have been conducted by the Commission. These have included sand tracing in Botany Bay and silt tracing in Newcastle Harbour and the Hunter River in association with maritime and development authorities.

Extensive research and development work on the technical and scientific applications of gamma radiation is also being carried out. The possibilities of radiation for such purposes as industrial sterilisation, food preservation, disinfestation of wheat and flour, and the control of fruit fly and other insect pests are being investigated. Scientists at Lucas Heights are also studying the biological effects of radiation and questions of health and safety.

The Research Establishment has developed facilities for the absolute standardisation of radioisotopes and has participated in international intercomparisons in the health and safety field. Work is directed to various aspects of radiation dosimetry, to radiation biology, and to aspects of the toxicology of beryllium compounds.

Lucas Heights is a centre of specialised equipment and information. In addition to the research reactor HIFAR, used for testing materials and producing radioisotopes, there is much other equipment unique in Australia. All these facilities are available to universities and other institutions under suitable conditions. In these endeavours the Atomic Energy Commission is working in close co-operation with the United Kingdom Atomic Energy Authority, under arrangements which give Australia access to results of British research on peaceful atomic energy uses. Results of research in Australia are in like manner available to Britain. Work in Australia, though constituting a self-contained programme, is co-ordinated with the British programme to avoid overlapping of research objectives and duplication of investigations. Australia also has bilateral arrangements with the United States, Canada and Japan, and recently accredited a diplomatic mission to the European Atomic Energy Community (Euratom). Australia is also taking part in the promotion of the peaceful uses of atomic energy through the International Atomic Energy Agency. For the year 1965-66 the Commission placed \$98,000 worth of research contracts mainly within Australian universities on matters related to the research programme at Lucas Heights. Since 1954 the Commission has placed research contracts to a total value of about \$1,146,000.

Considerable potential exists in Australia for possible future application of nuclear explosives for large civil engineering and mining projects. The Commission has maintained close interest in the developmental work under the United States Plowshare Program. A United States expert visited Australia in 1962, and an Australian technical mission visited the United States of America in 1963 to make a detailed examination of the use of nuclear explosives for peaceful purposes. The Commission continues to receive data and reports relating to progress in this field.

The Australian Institute of Nuclear Science and Engineering comprises the Australian Atomic Energy Commission and Australian universities. The Institute's operations are financed by membership subscriptions and a Commonwealth Government grant which amounted to \$150,000 in 1965-66. The purpose of the Institute is to stimulate research and training in nuclear science and engineering within the universities and to arrange access for university research workers to the highly specialised equipment at the A.A.E.C. Research Establishment.

The Australian School of Nuclear Technology is jointly sponsored by the Commission and the University of New South Wales. Courses are now being offered in nuclear technology, production and use of radioisotopes, radiological safety, health physics, and other related topics.

Scientific societies

Royal Societies

The following table contains the latest available statistical information regarding the Royal Societies in each State.

ROYAL SOCIETIES, DECEMBER 1966

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Canberra
Year of charter	1866	1859	1884	1880	1913	1844	1930
Number of members	357	483	374	236	234	596	173
Volumes of transactions issued(a)	99	80	(b) 77	90	55	100	..
Number of books in library	32,200	30,000	68,349	23,000	6,710	35,600	..
Societies on exchange list	390	333	294	331	235	314	..

(a) Cumulative total. (b) Volumes of proceedings.

Australian Academy of Science

The Australian Academy of Science is the national institution representing science in Australia. Constituted by Royal Charter in 1954, the Academy promotes scientific knowledge and research, maintains standards of scientific endeavour and achievement in the natural sciences in Australia, and recognises outstanding contributions to the advancement of science. The Academy represents Australian science and scientists at the national and international level, organises meetings of scientists, holds symposia, and arranges for visits of scientists, from other countries to Australia.

In its functions it is comparable with the Royal Society of London and national academies of science of many other countries. Its Fellows (designated F.A.A.) are eminent in some branch of the physical or biological sciences in Australia, occupying professional positions in universities, the Commonwealth Scientific and Industrial Research Organization, other research organisations, and industry. A very few places are reserved for Fellows who have rendered conspicuous service in the cause of science. No more than six new Fellows are elected in any one year. Its present membership is about 120 Fellows.

The Academy co-ordinates Australian contributions to such co-operative ventures as the International Geophysical Year, the International Year of the Quiet Sun, and the International Biological Programme. Representation is provided at the general assemblies of the International Scientific Unions and similar bodies relating to astronomy, geophysics, geology, physics, crystallography, mathematics, biochemistry, physiology, geography, biological sciences, chemistry, Antarctic research, space research, and oceanic research.

As the Australian Academy of Science is too young a body to be financially self-sufficient, the Commonwealth Government makes annual grants of general purpose funds without affecting the autonomy of the Academy. These grants, together with substantial private benefactions, enable the Academy to continue its work. Research fellowships provided by industry are administered. The Academy is managed by an elected council comprising a president, treasurer, two secretaries and eight ordinary members who are drawn equally from the physical sciences and biological sciences. Chief administrative officer is the Executive Secretary who is not a Fellow. Its conference centre in Canberra was opened in 1959.

Australian and New Zealand Association for the Advancement of Science

This association was founded in 1887. Its headquarters are at Science House, Sydney, and congresses are held at intervals of approximately eighteen months in the various States and in New Zealand. The 40th Congress is to be held in Christchurch, New Zealand, in January 1968. Divisions of A.N.Z.A.A.S. have been formed in Western Australia and New South Wales.

Other scientific societies

The Linnean Society of New South Wales, with headquarters in Sydney, was founded in 1874 for 'the cultivation and study of the science of natural history in all its branches'. Sir William Macleay, who died in 1891, during his lifetime and by his will endowed the Society to the amount of \$134,000, which has been increased by investment to approximately \$240,000. The objects of the Society are achieved by holding meetings, by publishing proceedings, by maintaining a library, and by offering research fellowships. The Society publishes annual volumes of the proceedings, issued in three parts, in which are printed papers read at the general meetings.

Ninety-one volumes of such proceedings have been issued and the Society exchanges with about 300 kindred institutions and universities throughout the world. The library has some 19,000 volumes. The Society offers annually to graduates of the University of Sydney, who are members of the Society and resident in New South Wales, a research fellowship (Linnean Macleay Fellowship) in various branches of natural history. The membership at the end of 1966 was 303.

The British Astronomical Society has a branch in Sydney, and in each of the States there is a branch of the Australian Medical Association.

There are more than 200 other learned societies devoted to the study of particular sciences. Some of these, including the Royal Australian Chemical Institute and the Institution of Engineers, Australia, are qualifying bodies, admission to which is by qualification only. Others, such as the Institute of Food Technologists, are open to any interested person. Some societies, such as the Australian Biochemical Society, have annual symposia of a very high standard. A great many of these bodies publish appropriate journals.

STATE GOVERNMENT EXPENDITURE ON EDUCATION, ETC.

Estimates of the expenditure by each State Government on education and related items are shown in the following tables.

Expenditure from revenue and special funds

Details shown relate to net expenditure from Consolidated Revenue and the special funds: Opera House Account, Maintenance and Repairs to Schools and Police Buildings Account and the Joint Coal Board Welfare Fund (New South Wales); Forestry Fund (Victoria); and Lotteries Commission Fund (Western Australia). Details exclude expenditure from the Commonwealth university grants, and expenditure on debt charges, pay-roll tax and superannuation payments. The cost of medical and dental inspection of school children is also excluded, as this service is considered to be more appropriately classified under public health. For these reasons, the figures do not represent total current government expenditure on education in each State. Furthermore, because of differences in organisation and accounting methods, the information shown is not on exactly the same basis for all States, and consequently comparisons of State expenditures are approximate only.

STATE NET EXPENDITURE ON EDUCATION, ETC. (a) FROM REVENUE AND SPECIAL FUNDS, 1961-62 TO 1965-66

(\$'000)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Total
1961-62 . .	125,974	89,264	36,016	32,534	25,016	12,722	321,526
1962-63 . .	135,176	100,352	39,852	35,612	26,922	13,920	351,834
1963-64 . .	151,262	113,288	43,894	40,318	29,940	15,340	394,042
1964-65 . .	179,218	124,935	47,265	44,468	34,137	17,382	447,405
1965-66 . .	189,456	140,030	51,826	49,621	39,257	18,572	488,762

(a) Includes expenditure on administration, transport of school children, teacher training, primary secondary, technical, agricultural, and university education; and expenditure of libraries, museums, etc.

State Loan Fund expenditure on educational buildings

Details in the following table show gross Loan Fund expenditure in each State on educational buildings.

STATE GROSS LOAN FUND EXPENDITURE ON EDUCATIONAL BUILDINGS

1961-62 TO 1965-66

(\$'000)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Total
1961-62 . .	32,356	28,320	6,834	11,888	5,814	3 770	88,982
1962-63 . .	32,148	28,130	8,818	11,910	5,458	4,046	90,510
1963-64 . .	35,631	30,566	11,270	9,850	5,867	4,759	97,943
1964-65 . .	40,177	30,450	9,609	11,183	7,030	4,456	102,905
1965-66 . .	48,852	31,900	8,163	11,759	7,743	4,655	113,072