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SECTION XXII.

PUBLIC INSTRUCTION.

§ 1. Evolution of Primary Education in Australia.

1. **Primary Systems of the States.**—(i.) *Place of New South Wales in Australian Education.* The first settlement in Australia being in New South Wales, it is but natural that Australian education should have had its beginnings in that State. In the evolution of educational method and system in Australia, New South Wales also has played a leading part, and has had practically a dominating influence. For that reason an account of the evolution of education in this State contains, as it were, the key to the understanding of the Australian attitude to this question. The subject is dealt with in some detail in No. I. and No. II. issues of the Commonwealth Official Year Book, but it is not proposed to repeat it in the present volume.

(ii.) *Primary Systems of other Commonwealth States.* A more or less detailed account of the origin and development of the primary educational systems of the other States also appears in preceding issues of the Year Book.

(iii.) *Present Position of Primary Education in Australia.* Throughout Australia primary education is compulsory and free, while there exists in most of the States a liberal provision of scholarships and bursaries to the higher State Schools, to the Secondary Schools, and to the Universities.¹ Generally speaking, the primary system is fairly well developed. Considerable interest is taken in educational matters by the people of the Commonwealth, and within the last few years the States of New South Wales and Victoria have sent qualified representatives to inspect and report on the methods adopted in the chief countries of Europe and America. The reports of these Commissioners have been widely studied, and various improvements have been made in accordance with their recommendations. The orientation, lighting, and ventilation of school buildings are being modernised. In some of the States periodical medical inspection of the children is in force. Methods of training teachers are being developed on up-to-date lines, although the "pupil teacher" is still in existence in all the States. Instruction generally has been greatly improved. There has been a wider employment of kindergarten principles in the early stages, and the more or less purely abstract teaching of the older days has been largely replaced by concrete methods. Such subjects as nature study, manual training, and drawing have received a general impetus. Lastly, the system of inspection has been considerably remodelled. Under the old system, the inspector was little more than an examining officer, but, under the present régime the primary duty of these officers consists in guiding and directing the teaching in accordance with approved methods.

(iv.) *Co-ordination of Educational Activities.* Although as pointed out in (iii.) the primary systems may be considered as fairly well organised, there is still need for a

1. There are Universities in four States, viz., New South Wales, Victoria, South Australia, and Tasmania. The University of Queensland will be opened at an early date.

more effective co-ordination of the entire educational activities of the States. At the present time, the brighter pupils from the State Schools may, through the medium of an excellent scheme of scholarships and bursaries, gain entrance to the Secondary Schools and to the Universities, but the average boy or girl simply leaves the State School at the age of fourteen or thereabouts, and the State apparently no longer concerns itself with them. A small proportion attends evening schools or technical classes, others persevere in private study, but it is to be feared that many make no further attempt at progress. This condition of affairs has been recognised, and efforts have been made to meet it by providing additional evening schools, extending the facilities for technical instruction, arranging for University extension lectures, etc.

§ 2. State Schools.

1. **Enrolment and Attendance.**—The following table shews the number of State Schools, together with the teachers employed and the enrolment and “average attendance” in each State during the year 1908:—

STATE SCHOOLS, TEACHERS, AND SCHOLARS, 1908.

State.	Schools.	Teachers.*	Enrolment.	Average Attendance.
New South Wales	3,127	5,628	216,747	156,000
Victoria	2,017	4,680	205,541	143,551
Queensland	1,104	2,413	87,229	67,309
South Australia	690	1,322	54,157	38,193
Western Australia	414	914	30,176	25,141
Tasmania	362	632	24,986	15,952
Commonwealth	7,714	15,589	618,836	446,146

* Exclusive of sewing mistresses.

Unfortunately, the schemes of enrolment and of the computation of “average attendance” are not identical in each State, so that the comparisons are imperfect. That the educational statistics of each State of the Commonwealth should be made up in the same way is much to be desired.

The enrolment and average attendance at the State Schools in the Commonwealth are given below for the year 1891, and for each year of the period 1898 to 1908:—

ENROLMENT AND ATTENDANCE AT STATE SCHOOLS, 1891 to 1908.

Year.	Total Population. ¹	Enrolment.	Average Attendance.	Year.	Total Population. ¹	Enrolment.	Average Attendance.
1891	3,240	561,153	350,773	1903	3,927	629,269	446,539
1898	3,665	594,916	397,027	1904	3,984	625,594	445,709
1899	3,716	608,431	424,214	1905	4,052	621,534	442,808
1900	3,765	623,707	441,924	1906	4,119	609,592	442,440
1901	3,826	638,478	450,246	1907	4,197	611,990	444,001
1902	3,883	636,888	455,482	1908	4,275	618,836	446,146

1. In thousands.

It will be seen from the above table that, despite the increase of population, the official figures of enrolment and average attendance at the State Schools of the Commonwealth shew unsatisfactory results. An examination of the graphs on pages 238 to 240, shewing birth-rate, will make it apparent that this is at least in part due to the diminished birth-rate of past years.

2. Births and School Attendance.—The table below gives the total births in each State and in the Commonwealth during each of the eight-year periods 1890-97, 1891-98, 1892-99, 1893-1900, 1894-1901, 1895-1902, and the average attendance at State Schools for each year from 1903 to 1908:—

COMPARISON OF BIRTHS AND SCHOOL ATTENDANCE.

Year.	New South Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Commonwealth.
TOTAL BIRTHS.							
1890-97 ...	310,279	281,918	116,600	83,068	18,606	38,894	849,365
1891-98 ...	307,541	274,512	115,126	81,674	22,013	38,661	839,527
1892-99 ...	304,544	267,015	114,310	80,344	25,401	38,364	829,978
1893-1900	301,649	259,963	114,208	78,951	29,007	38,263	822,041
1894-1901	299,182	254,419	114,117	77,356	32,613	37,977	815,664
1895-1902	298,066	250,622	114,356	75,804	36,722	38,210	813,780

ATTENDANCE AT STATE SCHOOLS.

1903 ...	154,382	145,500	69,759	42,752	20,283	13,863	446,539
1904 ...	153,260	145,122	68,661	42,234	22,111	14,321	445,709
1905 ...	151,033	143,362	68,780	41,807	23,703	14,123	442,808
1906 ...	151,261	142,216	69,771	40,489	24,973	13,730	442,440
1907 ...	152,607	147,270	66,849	37,861	24,950	14,464	444,001
1908 ...	156,000	143,551	67,309	38,193	25,141	15,952	446,146

Although the returns of school attendance shew a slight improvement in 1908, the position disclosed by the two sets of figures given above is sufficiently serious to call for earnest consideration. With the exception of New South Wales, Western Australia, and Tasmania the States and the Commonwealth as a whole all shew a decreased school attendance consequent on a falling birth-rate over the period dealt with. In Tasmania the increase is largely due to a keener enforcement of the compulsory clauses of the Act. As regards Victoria, the sudden growth in attendance for the year 1907 resulted from a more stringent Education Act (No. 2005), while the decline in 1908 is attributed to epidemics of children's diseases. In explanation of the connection between the two sets of figures it may be noted that the children at school in 1908 will naturally consist chiefly of those born in the period 1895-1902, the attendance for 1907 will be composed principally of the births of the period 1894-1901, and so on.

3. Centralisation of Schools.—The question of centralisation of schools adopted so successfully in America is receiving some attention in the Commonwealth, and particularly in New South Wales. It is recognised that a single adequately-staffed and well-equipped central institution can give more efficient teaching than a congeries of small scattered schools in the hands of less highly-trained teachers, and the small schools in some districts were therefore closed and the children conveyed to the central institution. The principle was first adopted in New South Wales in 1904, when the conveyance of pupils was authorised in the case of twelve schools.

4. **Education in Sparsely-settled Districts.**—It has always been the aim of the State to carry the benefits of education into the remotest and most sparsely-settled districts. This is effected in various ways. (i.) By the establishment of provisional schools, *i.e.*, small schools in which the attendance does not amount to more than about a dozen pupils, these institutions merging into the ordinary public school list when the attendance exceeds the minimum. (ii.) When there are not enough children to form a provisional school what are known as half-time schools are formed, the teacher visiting them on alternate days. In still more sparsely-peopled districts an itinerant teacher goes from house to house within a certain radius. In New South Wales parents in the thinly-peopled areas are also allowed to club together and build a school, which receives aid from the Government in the form of a yearly subsidy and grant of school material. An experiment on the part of New South Wales, the result of which will be watched with some interest, is the establishment of a "travelling" school. A van has been built, in which the teacher will travel and carry with him a tent for himself and one to be used as a school, together with such books and apparatus as are required in a primary school. The school has been in operation since August, 1908, and has so far given very satisfactory results.

5. **Higher State Schools.**—(i.) In *New South Wales* public schools, in which the subjects taught embrace, in addition to the ordinary course, such others as will enable the pupils to compete at the Senior and Junior University Examinations, are classed as *Superior Schools*. There were 142 of these schools in existence at the end of 1908. There are also five *High Schools* in the State—two for boys, two for girls, and one for boys and girls. These had an enrolment in 1908 of 969 pupils, with an average attendance of 728. In twenty country centres the superior public schools practically correspond to the high schools, and the educational standards and instructional staff have been so arranged as to prepare for the University matriculation. It is intended also to adapt the teaching in these institutions to the special needs of the districts in which they are situated. Further, these high schools and district schools will be used as preparatory schools for the training of young persons who wish to become teachers. In order to provide teachers of agriculture, provision is made for ten teacher-students annually to attend the second year's training at the Hawkesbury Agricultural College.

(ii.) In *Victoria*, what are termed "*Continuation Schools*" have been established at Melbourne, Ballarat, and Bendigo for the purpose of giving preliminary training to young people who propose to join the ranks of the teaching service, and it is hoped that ere long the supply from this source will preclude the necessity for the employment of inexperienced pupil teachers. It is expected that these schools will shortly be able to supply the 300 junior teachers annually needed by the Department. Agricultural High Schools are referred to in (6) hereafter.

(iii.) *Queensland* does not possess any distinctly secondary schools under State control, although it is proposed to establish high schools in the more important centres at an early date. There are, however, ten Grammar Schools—six for boys, and four for girls, each of which is subsidised by the State to the extent of £750 per annum, and in addition receives a payment of £250 per annum for providing district scholarships. These scholarships, fifty in number, are granted to State School pupils. The enrolment at the Grammar Schools in 1908 was 1101, and the average attendance 970. It is intended that the schools shall be regularly examined by the newly appointed Inspector-General.

(iv.) *South Australia*. The Adelaide High School was opened on the 24th September, 1908, and the Advanced School for girls, which had been carried on with much success since its opening in 1879, was merged into it, as was also the Pupil Teachers' School, which had been successfully carried on for eight years. Pupils in attendance at the combined school in 1908 numbered 508, of whom 263 were girls. During 1907 continuation classes for higher primary work were established in country centres. These

classes are conducted in connection with the chief district schools, and under the supervision of their head teachers. It is proposed later on to establish District High Schools.

(v.) *Western Australia.* With the exception of the technical schools and the normal school referred to elsewhere, there is no distinctly secondary school under the control of the State in Western Australia. It is proposed to establish shortly a large higher grade or Continuation School in Perth, in which the normal school may be merged, and to establish similar institutions later on in other large centres of population. Evening Schools are held in various parts of the State, but the work carried on is mainly primary. The Perth High School for Boys is subsidised by the State to the extent of £1000 annually.

(vi.) *Tasmania.* No direct provision has hitherto been made by Tasmania for public education of a standard intermediate between that of the State School and the University, but a few pupils are prepared in the ordinary State Schools for the Junior Public Examination of the University. It is intended to encourage this work in future, and the scheme of scholarships, which was discontinued for many years, has recently been revived. For a period of thirty years, from 1860 to 1890, there was in force in Tasmania a system under which the State, without actually providing educational agencies, did much to foster education within the range of the generally accepted high school curriculum, for the Council of Education during this period conducted public examinations of various grades, at which scholarships for juniors to "superior" schools were awarded, as well as exhibitions to British Universities. The Council also granted the degree of "Associate of Arts" in imitation of the similar Oxford title. Later on the Council of Education evolved and expanded into the University of Tasmania.

6. Agricultural Training in State Schools.—The question of agricultural training in ordinary schools has received considerable attention in *New South Wales*. In 1905 a teacher of school agriculture was appointed to visit schools and districts for the purpose of giving instruction to teachers and scholars in the subject, the officer selected possessing the dual qualifications of a thorough acquaintance with agricultural work and school methods. Under the direction of a capable head master, a college has also been opened at Hurlstone, near Sydney, at which practical lessons are given in elementary agriculture, and the institution also serves as a stepping-stone to the Hawkesbury Agricultural College. The attendance at the Hurlstone institution in 1908 reached 55.

The subject of agricultural colleges and experimental farms is dealt with in the section relating to Agriculture. (See page 418.)

In addition to the regular courses of instruction given in the schools, the practice of carrying on "rural camps," where city schoolboys may gain some insight into the conditions of country life, has for some time been in successful operation.

In *Victoria* what are termed Agricultural High Schools have been established at Warrnambool, Sale, Shepparton and Wangaratta. Pupils must be at least fourteen years of age, and have obtained a certificate of merit from the local school, or else be able to afford satisfactory proof that they are qualified to profit by the instruction offered. A local council is to be appointed for each school, and will exercise a general oversight over its operations. The experimental plots at these schools have aroused much interest among the farmers from the surrounding districts.

Although *Queensland* possesses an Agricultural College and several experimental farms, there is no agricultural institution directly connected with the Education Department. The Government, however, provides a small grant to encourage the study of agriculture, horticulture, and kindred subjects in the State schools, while experts from the Agricultural College and State farms periodically visit the schools in which elementary agriculture is taught, and give instruction to teachers and pupils. A large number of teachers have gained a practical knowledge of milk and cream testing, and the subject is now added to the programme of instruction in several of the dairying districts.

In *South Australia* the Public Schools' Floral and Industrial Society, founded in 1880, holds annual exhibitions of school work from all parts of the State. In addition, it has for some years undertaken the distribution of flower seeds among school children at a very cheap rate, and has thus fostered the love of horticulture with remarkable success. A special instructor has been appointed to give assistance to teachers desirous of making their school gardens aid in nature study work.

Beyond encouragement in the direction of making gardens in the school grounds little has been done in the way of practical agricultural training in the schools of *Western Australia* and *Tasmania*. At some of the schools in the former State there are experimental plots for elementary agricultural work.

7. Teachers in State Schools.—The distribution of the teaching staff in the State schools during the year 1908 was as follows:—

TEACHING STAFF IN STATE SCHOOLS, 1908.

State.	Principal Teachers.		Assistants.		Pupil or Junior Teachers.		Sewing Mis-tresses.	Total.		
	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Total.
New South Wales	2,195	561	875	1,635	130	232	100	3,200	2,528	5,728
Victoria ...	1,509	649	195	816	302	1,209	420	2,006	3,094	5,100
Queensland ...	655	443	320	592	141	262	—	1,116	1,297	2,413
South Australia ...	293	400	56	317	73	183	116	422	1,016	1,438
Western Australia	264	167	72	292	26	93	62	362	614	976
Tasmania ...	165	194	21	120	32	100	—	218	414	632
Commonwealth	5,081	2,414	1,539	3,772	704	2,079	698	7,324	8,963	16,287

It will be observed that there is a fairly large number of junior teachers, or pupil-teachers, as they are called in most of the States. The pupil-teachers will, however, in time disappear, and their places will be filled by young people who have undergone a course of training in schools specially provided for the purpose. Allusion to the methods of training will be found in the next paragraph.

8. Training Colleges and their Development.—(i.) *New South Wales*. Up to the year 1905 the teachers in New South Wales State schools, generally speaking, commenced their career between the ages of fourteen and sixteen years, when they were known as "pupil-teachers." As such, they were held responsible for the instruction of a certain number of children, and, in return for their services, received payment partly in the form of a small salary, and partly in teaching and advice from the principals of the schools wherein they were employed. *After serving about four years*, and subject to passing various examinations designed to test progress in pædagogics and ordinary book learning, *a limited number of the pupil teachers was admitted to a course of training in a training college* if successful in passing the qualifying examination. On emerging from this institution, after a course of from one to three years, the teacher became known as an "assistant," and later on became master or mistress of a school. Pupil-teachers who did not enter the Training College were placed in charge of small country schools or appointed "assistants," and later on were allowed to compete in the examinations with the trained teachers; in fact, it was found temporarily to the advantage of teachers not to enter the college. Such was the career of the "trained" teacher; but there was in addition a considerable body of untrained teachers who had commenced teaching in small country schools, and many of whom by perseverance and natural aptitude had gained positions of considerable importance in the Department.

Within the last few years, however, it has come to be recognised that the logical place of a scheme of training is antecedent to employment as a teacher, and with this end

in view it has been decided to abolish the so-called pupil-teacher, and to establish continuation schools from which, as well as from the high schools, the future supply of young teachers is to be drawn. It is hoped that the pupil-teacher, as such, will be extinct in a few years. In the meanwhile there were still as many as 362 employed at the end of 1908. Unfortunately, many of the smaller country schools will still have to be supplied by appointments of untrained persons; but it is hoped that under the new system of inspection the inspectors themselves will be able to devote a fair amount of time to instructing the teachers in correct methods. During vacations the country teachers will also have some opportunities of forming acquaintance with up-to-date ideas by attending Summer Schools, Rural Camp-schools, etc.

The old Fort-street Training College for males and the Hurlstone College for females were closed in 1905, and pending the erection of a properly-equipped institution in the University grounds the teachers are being trained at the Blackfriars Public School, Redfern. During 1908 there were 314 students in the institution.

(ii.) *Victoria.* The teachers in this State are trained by means of what is known as the "junior-teacher" system, *i.e.*, training of junior-teachers in the State schools by the head masters, or by a two years' course in a junior training college—otherwise known as a Continuation school—supplemented by a course of training for two years in the Senior Training College at Melbourne. There are seven Continuation schools now in operation of which four give training in agriculture also. At the Melbourne, Ballarat, and Bendigo schools students are admitted for training as junior teachers, while the students at Sale Warrnambool, Shepparton, and Wangaratta are taught in addition the theory and practice of farming. The junior teacher is, of course, not sensibly different from the pupil-teacher of New South Wales. At the expiration of two years in the Continuation schools they may qualify for entrance to the Senior Training College for a further period of two years, at the end of which time they will be appointed to sixth-class positions as State school teachers at an annual salary of £120 16s. for men, and £90 to £100 for women.

It is anticipated that there will shortly be a sufficient number of students in the Continuation schools alone to meet the demands of the teaching service. The present junior-teaching system will then be modified to the extent that all candidates for the teaching profession will be required to graduate in one of these schools.

The present Training College dates back to 1874, but during the retrenchment period, *viz.*, from 1893 to 1900, it was closed. The institution was reopened in February, 1900, with an enrolment of fifty-seven students. By the 31st August, 1908, the number had increased to 130. Since its reopening the college has also given attention to the training of kindergarten teachers, and the course of study prescribed for infant teachers has received the sanction of the Education Department and also of the Kindergarten Association. The College receives students for training from private schools. Of the students in 1908, 89 were departmental, 22 were private school students being trained in kindergarten methods, and 19 were private school students being trained as primary teachers.

(iii.) *Queensland.* There is no training college in Queensland at the present time, but it is hoped ere long to establish one at Brisbane. Young people of both sexes are admitted to the service as pupil-teachers at the age of fourteen years, the only training received being that given by the principals of the schools to which they are appointed.

(iv.) *South Australia.* Up to the year 1908 the system of training candidates for the teaching staff in South Australian State schools was, briefly, as follows:—(a) Two years of general education in the High School; (b) two years as junior teachers in the primary schools, (c) two years general study at the University, without special professional training, and with a limited amount of practical teaching. The new arrangements provide for three years of general education at the High School, two years as junior teacher, and, for a great number, one year at the University training college. In special cases the University course may be extended to two, or even three years. Seventy-

nine students attended the college in 1908. During the month of July, 120 teachers from outlying portions of the State were allowed to close their schools and attend a special school of instruction in Adelaide.

(v.) *Western Australia.* A training college for teachers was opened at Claremont in 1902. The original building provided accommodation for sixty students, but extensions being opened in 1908, the number in training during 1908 was ninety, including twenty-eight teachers for special courses. The course in the training college lasts two years. Central classes for "monitors" (*i.e.*, pupil-teachers) were established at Perth in 1903, and monitors outside the metropolitan area are instructed by correspondence. A normal school was established in Perth in 1907 for the purpose of providing a two years' course of higher instruction for a limited number of children who had completed the State school course and intended to become teachers. The pupils in attendance during 1908 numbered fifty-nine, of whom forty-one were girls. It may be observed that the normal school does not aim at giving instruction in the principles and practice of pædagogics, this being left to the teachers to whose schools the students are drafted.

To assist teachers of small schools to gain some experience of the best method of school management, a model school has been established at Gosnell's, and arrangements have been made for intending teachers, as well as those actually in charge of small schools, to spend a portion of their time at this institution.

(vi.) *Tasmania.* The system of training adopted in Tasmania is as follows:—(a) The candidate is selected at fourteen years of age by a head teacher, and assists as a "monitor" for about a year, during which period he must give proof of suitability for training. (b) At the end of this period there is a two years' course of training in the training college. (c) The candidate then returns to his own school and teaches there for two years, the head teacher being responsible for his training in practical work, while the training college authorities give lessons by correspondence. (d) The last stage is a final year in the training college as a senior student. Some of the more advanced are granted a second year's training, and it is proposed to allow at least one each year to proceed to the Diploma of Education at the Melbourne Training College.

At present there is room in the Tasmanian Training College for about sixty students, the number in attendance in 1907 being fifty-three.

9. **Expenditure on State Schools.**—The net expenditure in each State on primary education during each year of the period 1901 to 1908 is shewn below. The figures do not include expenditure on buildings, which is shewn separately in a subsequent table.

EXPENDITURE ON MAINTENANCE, STATE SCHOOLS, 1901 to 1908.

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tasmania.	Cwlth.
	£	£	£	£	£	£	£
1901 ...	623,784	656,907	256,245	152,006	89,694	37,710	1,816,296
1902 ...	652,860	681,282	261,317	151,462	103,898	48,161	1,898,980
1903 ...	677,683	669,376	256,325	147,297	122,016	48,300	1,920,997
1904 ...	693,954	670,182	261,583	147,842	134,064	50,018	1,957,643
1905 ...	699,789	663,580	278,972	151,242	139,043	44,974	1,977,600
1906 ...	727,471	663,302	286,629	152,713	153,010	45,683	2,028,808
1907 ...	816,249	677,701	297,210	152,400	159,122	52,830	2,155,512
1908 ...	934,603	692,410	299,227	152,950	164,456	60,407	2,304,053

The above figures are equivalent to an expenditure per head of average attendance as follows:—

COST PER HEAD OF AVERAGE ATTENDANCE, STATE SCHOOLS, 1901 to 1908.

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tasmania.	Cwlth.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1901 ...	4 0 10	4 7 0	3 12 9	3 9 5	5 9 3	2 12 11	4 0 8
1902 ...	4 3 9	4 10 8	3 11 9	3 9 8	5 12 8	3 6 3	4 3 5
1903 ...	4 7 10	4 12 0	3 13 6	3 8 11	6 0 4	3 9 8	4 6 0
1904 ...	4 10 7	4 12 4	3 16 2	3 10 0	5 1 3	3 9 10	4 7 10
1905 ...	4 12 8	4 12 7	4 1 2	3 12 4	5 17 3	3 3 8	4 9 4
1906 ...	4 16 2	4 13 3	4 2 2	3 15 5	6 2 6	3 6 6	4 11 8
1907 ...	5 7 4	4 12 0	4 8 11	4 0 6	6 8 11	3 12 9	4 17 4
1908 ...	5 19 9	4 16 6	4 8 11	4 0 1	6 10 10	3 15 9	5 3 3

Expenditure on school buildings in each of the years quoted was as follows:—

EXPENDITURE ON STATE SCHOOL BUILDINGS, 1901 to 1908.

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tasmania.	Cwlth.
	£	£	£	£	£	£	£
1901 ...	57,663	36,040	33,421	13,656	49,073	7,762	197,615
1902 ...	76,793	81,946	9,443	11,250	32,669	11,931	224,032
1903 ...	100,955	39,369	9,006	11,805	35,953	6,710	203,798
1904 ...	72,051	19,502	14,489	9,056	32,892	4,427	152,417
1905 ...	58,820	32,041	14,187	9,094	35,925	4,809	154,876
1906 ...	89,975	39,184	24,896	13,340	39,390	3,456	210,241
1907 ...	103,348	68,416	30,340	15,339	38,928	7,216	264,587
1908 ...	146,715	106,983	44,333	22,726	34,299	8,659	363,715

The total net cost and the net cost per scholar in average attendance during the year 1908 were as follows:—

NET TOTAL COST PRIMARY EDUCATION, 1908.

Item.	N.S.W.	Vic.	Q'land.	S. Aust.	W. A.	Tas.	C'wlth.
	£	£	£	£	£	£	£
Net cost of primary education, including buildings ...	1,081,318	799,393	343,560	175,676	198,755	69,066	2,667,768
Per scholar in average attendance ...	£6 18/7	£5 10/7	£5 2/1	£4 6/-	£7 18/1	£4 6/7	£5 19/7

The average for the Commonwealth in 1901 was £4 9s. 3d. per scholar in average attendance.

§ 3. Private Schools.

1. **School Teachers, etc., in 1908.**—The following table shews the number of private schools, together with the teachers engaged therein, and the enrolment and average attendance in 1908:—

PRIVATE SCHOOLS, 1908.

State.	Schools.	Teachers.	Scholars Enrolled.	Average Attendance
New South Wales	792	3,501	57,111	48,203
Victoria	696	2,188	54,036	*48,000
Queensland	167	750	15,199	12,898
South Australia	196	697	10,888	9,168
Western Australia	118	413	8,081	6,561
Tasmania	156	468	7,084	*5,700
Commonwealth	2,125	8,017	152,399	125,530

* Estimated.

2. **Growth of Private Schools.**—The enrolment and average attendance at private schools during 1891 and in each year of the period 1898 to 1908 are shewn below:—

ENROLMENT AND ATTENDANCE AT PRIVATE SCHOOLS, 1891 to 1908.

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891 ...	124,485	99,588	1903 ...	147,135	120,193
1898 ...	145,434	116,341	1904 ...	146,339	119,915
1899 ...	151,803	122,188	1905 ...	145,143	118,627
1900 ...	153,433	124,313	1906 ...	152,058	124,510
1901 ...	148,659	120,742	1907 ...	152,037	122,878
1902 ...	144,437	117,293	1908 ...	152,399	125,530

Although there has been some improvement in regard to average attendance at the private schools the enrolment has remained practically at a standstill during the last three years.

3. **Defects in Returns of Private Schools.**—Throughout Australia, until quite recently, no administrative machinery existed by means of which supervision could be exercised over the course of education carried out under other agis than that of the Departments of Education themselves. These departments were without authority over the qualifications of the teaching staff, the equipments, the curricula, or general circumstances of private or denominational schools. With the exception of Western Australia, Victoria, and Tasmania this state of things continues to the present time.

Without a thorough system of registration of all schools (public or private) the certainty of the operation of the compulsory clause of Public Instruction Acts must necessarily be insecure. Proper statistical information, moreover, cannot be obtained without imposing upon all schools the duty of rendering complete and prompt returns in regard to enrolment, attendance, teaching staff, equipment, etc.

Recent educational criticism has led, not only to a better training of teachers in State schools, and, to some extent, in private schools, but also to a better recognition of the importance of accurate information as to the progress of educational events. It is understood that in New South Wales steps will be taken shortly to secure more adequate information as to the condition of schools generally.

In Victoria up to the year 1905 no attempt had been made to bring private schools under general administrative control; but the Registration of Teachers and Schools Act of 1906 established a registration scheme under a special Board. This Board has now registered the private schools and teachers in the State. The prime object of the Act is that after a lapse of a definite period there shall be no school of any kind in the State.

which does not comply with reasonable demands and requirements concerning the nature of its building, its equipment, and the qualifications of its teachers. The teachers who have registered belong to the following classes:—Sub-primary, 2377; primary, 4928; secondary, 1705; and 3330 teachers of special subjects. Some teachers have registered under two, three or four divisions, and the number of individual teachers is given as about 8382. The teaching staff of the Department of Public Instruction itself is not subject to the Registration Board. Registered private schools of all kinds number 773. The only control which the Government has on the scholars in private schools is provided by the law as to compulsory attendance, "efficient and regular instruction" in a private school being counted as adequate excuse for not attending the requisite number of days at a State school.

In Queensland, with the exception of the grammar schools, which it is now proposed to examine annually, there is practically no control over the private schools, beyond the fact that they may submit themselves to inspection if so desired, and there is apparently no provision in South Australia for any Government supervision over private school affairs.

In Western Australia, however, non-Government schools must be declared efficient by the Education Department if attendance at them is to be recognised as fulfilling the requirements of the law, and the school registers must be open to the inspection of the compulsory officers of the Department.

In Tasmania the Education Act requires the teachers of other than State schools "to furnish during January of each year returns shewing attendances at such schools." Despite the fact that penalties are prescribed for non-compliance with the law, nevertheless many teachers neglect to return the forms sent out. Provision has been made for registration of private teachers and schools very much on the lines adopted in Victoria. The Act declares that all persons who were employed in a *bond fide* manner for at least three months before 25th October, 1906, are entitled to be registered as teachers without submitting proof of professional qualifications. No person can be registered as a private teacher since July, 1907, unless the Board is satisfied as to his fitness for the work.

§ 4. Universities¹

1. **Origin and Development.**—The history of the foundation and progress of the four Australian Universities was traced at some length in Year Books No. I. and No. II. In the present volume space will permit of only a very brief reference to the subject.

(i.) *University of Sydney.* The Act of Incorporation of the University of Sydney received Royal assent on the 1st October, 1850, and the first Senate was appointed on the 24th December of that year. The first matriculation examination was held in October, 1852, when twenty-four candidates passed the required test, and the formal inauguration ceremony took place on the 11th October of the same year. A Royal Charter was granted to the University on the 27th February, 1858. Women students were admitted in 1881. At the inception of the University there were only three professorships. The present staff consists of fifteen professors, three assistant professors, and eighty lecturers and demonstrators. There are, in addition, three honorary lecturers and three honorary demonstrators.

(ii.) *University of Melbourne.* This institution was established by Act of Parliament assented to on the 22nd January, 1853, and its first Council was appointed on the 11th April of that year. The foundation stone of the main building was laid on the 3rd July, 1854, and the University was formally inaugurated on the 13th April, 1855. By Royal Letters Patent issued in 1859 its degrees are, like those of the Sydney institution, declared of equal status with those of any other university in the British Empire.

1. The University of Queensland will be opened at an early date, and the question of establishing one in Western Australia has also been mooted.

Women students attended lectures for the first time in 1881. The University, which began in 1855 with Schools of Arts and Laws, has now a staff of fifteen professors, forty-six lecturers and demonstrators, and ten honorary demonstrators. The Conservatorium of Music has a staff numbering eighteen.

(iii.) *University of Adelaide.* This University was established by Act of Parliament in 1874. Its origin and progress was largely due to the munificence of the late Sir Walter Watson Hughes and Sir Thomas Elder, G.C.M.G., the total gifts of the latter amounting to nearly £100,000. The academical work of the institution was commenced in March, 1876, when eight matriculated and fifty-two non-graduating students attended lectures. The foundation stone of the University buildings was laid on the 30th July, 1879, and the buildings were opened in April, 1882. In 1881, by Royal Letters Patent, the degrees granted by the institution were recognised as of equal distinction with those of any university in the British Empire. The Elder Conservatorium of Music was opened in 1898. Power was given by Act of Parliament in 1880 to grant degrees to women. At first there were only four professorships in the University, whereas the present staff consists of nine professors, and twenty-five lecturers, exclusive of the staff at the Conservatorium, which numbers ten.

(iv.) *University of Tasmania.* The Act to establish the University of Tasmania (Hobart) was assented to on the 5th December, 1889. At the present time, the institution, which is small, but efficient, possesses a staff of three professors and five lecturers. Under Statute dated 13th April, 1905, the Zeehan School of Mines and Metallurgy was affiliated to the University.

2. Teachers and Students of Universities.—The following table shews the number of professors and lecturers and the students in attendance at each of the Commonwealth Universities during the year 1908 :—

University.	Professors.	Lecturers.	Students attending Lectures		
			Matriculated.	Non-matriculated.	Total.
Sydney	18	74	875	449	1,324*
Melbourne	15	60	...	...	804†
Adelaide	10	26	384	287	671‡
Tasmania (Hobart) ...	3	5	61	54	115||

* Including 172 females. † Including 96 females, but excluding 9 male and 107 female music students. ‡ Including 157 females, but exclusive of 7 matriculated music students || Including 62 females.

3. University Revenues.—The income of the Universities from all sources during the year 1908 was as follows :—

University.	Government Grants.	Fees.	Other.	Total
	£	£	£	£
Sydney	15,800	18,272	19,952	53,524
Melbourne	21,000	24,501	824	46,325
Adelaide	7,092	9,690	7,448	24,230
Tasmania (Hobart) ...	4,500	1,028	638	5,666

The column "Other" includes the receipts from private foundations. In the case of the Sydney University these were considerable, the Challis bequest alone representing property to the value of £268,224.

4. University Extension.—Under a statute of the Senate of Sydney University, approved of in 1892, a Board was appointed, which was empowered from time to time to recommend to the Senate the names of suitable persons for giving courses of lectures,

and to hold examinations in the subjects of the lectures. The Board receives and considers applications from country centres, and makes provision for engaging lecturers and managing the entire business connected with the various courses. The project has only met with fair success, no lectures having been given in some years, but lately there appears to be an awakening of interest in the matter. The Board also arranges for courses of lectures in Queensland. In 1908 the average attendance at extension lectures in New South Wales was 464.

University extension lectures in Victoria date from the year 1891, when a Board was appointed by the Melbourne University for the purpose of appointing lecturers and holding classes and examinations at such places and on such subjects as it might think fit. Interest in University extension is apparently on the wane in Victoria, as lectures were delivered in four centres only in 1907 and 1908, as against eight centres in 1904.

The Adelaide University has also instituted short courses of extension lectures in Arts and Science, to which students are admitted on payment of a nominal fee. Public intimation of these lectures is made from time to time during the session. For 1909 a course of twelve lectures was provided. The University of Tasmania provides for courses of lectures at Launceston, which are being delivered weekly by members of the University teaching staff.

§ 5. Technical Education.

1. **General.**—Although provision has been made in some of the States in respect to many necessary branches of technical education, the total provision made would imply that this branch of education has not been regarded as of great importance. As will be seen later on, the expenditure on technical education for the whole of Australasia is comparatively insignificant.

2. **New South Wales.**—The present organisation of technical education in this State dates from the year 1883, when a Technical Education Board was appointed as a result of suggestions made at the Technological Conference held in 1879. This Board continued its functions till November, 1889, when it was dissolved, and the work has thenceforward been carried on as a branch of the Public Instruction Department. The chief centre of activity is, of course, in Sydney, where the Technical College and Technological Museum are situated, the college having been opened for the reception of students early in 1892. Colleges have also been erected in some of the chief country towns, and classes in various subjects are held at a large number of public schools. As mentioned elsewhere, higher technical training is afforded at the Schools of Mines and Engineering in connection with the University. References to the agricultural colleges will be found in the section dealing with Agriculture. (See page 418.)

3. **Victoria.**—Technical instruction in mining has for many years received considerable attention in Victoria, the Ballarat School of Mines, which was established as far back as 1870, having achieved an Australasian reputation. The general scheme of instruction, however, lacked cohesion, and it was not until after the publication of the Report of the Royal Commission on Technical Education, which was appointed in 1899, that many defects were remedied. The largest technical institution in Melbourne is the Working Men's College, founded in 1887. The College, in addition to giving instruction to a large number of technical subjects, is also a School of Mines. Science and Art classes have been established at some of the larger State schools.

4. **Queensland.**—Previous to 1902 technical colleges were carried on in connection with Schools of Art in many of the towns, under the control of local committees, by whom regulations were framed and the colleges administered. The aid granted by the State was £1 for every £1 raised locally, but no grant was to exceed the amount voted annually by Parliament. In 1902 a Board of Technical Education was formed, and held office from September of that year till the 27th May, 1905, and during this time devoted much energy towards the improvement of technical education in Queensland. The

control, however, was removed from the Board in July, 1905, and vested in the Minister of Education, who appointed an officer of his Department to the position of Inspector of Technical Colleges. This officer reports on technical education generally, inspects the colleges, sees that the grants to the various colleges are spent to the best advantage, and so on. Under "The Technical Instruction Act of 1908" the State may contribute four-fifths of the cost of construction and equipment of technical colleges, and the provision has already been availed of in several instances. Efforts are being made to bring the country technical colleges into closer relationship with the State schools.

5. South Australia.—A considerable amount of attention has been given to technical education in South Australia, particularly in connection with the mining industry. The School of Mines and Industries in Adelaide was founded in 1889. There are also Schools of Mines at Moonta, Port Pirie, Kapunda, and Gawler. There is also a School of Design, Painting, and Technical Arts in Adelaide, with branches at Port Adelaide and Gawler.

6. Western Australia.—A technical school was established at Perth in 1900, and since its opening has progressed rapidly. The institution is affiliated with the Adelaide University, and it is hoped that the students will shortly be allowed to take the degree of B.Sc. without leaving the school. There are branch institutions at Midland Junction, Fremantle, Claremont, Coolgardie, Kalgoorlie, Boulder, Menzies and Murchison. The schools are all under the control of the Education Department, the officer entrusted with their supervision being styled Director of Technical Education. The Director also supervises the School of Mines at Kalgoorlie, which is controlled by the Mines Department.

7. Tasmania.—In this State provision for technical education dates from the year 1888. At the present time the most important technical institution is the School of Mines and Metallurgy at Zeehan. Courses of instruction are given in metal mining and in metallurgical chemistry and assaying, the diploma in metal mining entitling the holder to the Government certificate of competency as a mine manager. The institution is affiliated to the University of Tasmania. There are also two other schools under the control of the Education Department, each managed by a committee appointed by the Governor-in-Council. Tasmanian technical schools naturally devote their chief attention to mining and mineralogy.

The table hereunder shews the enrolment and attendance at technical schools and classes in the Commonwealth during 1908:—

ATTENDANCE AT TECHNICAL SCHOOLS, 1908.

State.	No. of Technical Schools.	Enrolment	Average Attendance	Other Technical Classes.			
				At State Schools.		Schools of Arts, etc.	
				Enrolment	Av. Attend.	Enrolment	Av. Attend.
N.S.W. ...	92	16,075	9,506	2,415	992	360	320
Victoria ...	17	6,012	*	444	*	...	...
Queensland ...	17	5,187	2,640	...	...	...	...
S. Australia ...	6	2,508	1,964	343	...	...	...
W. Australia ...	9	1,337	*	...	...	...	...
Tasmania ...	4	680	171	...	...	...	...

* Not available.

8. **Expenditure on Technical Education.**—The expenditure on technical education in each State during the period 1901 to 1908 is shewn below:—

EXPENDITURE ON TECHNICAL EDUCATION IN AUSTRALIA, 1901 to 1908.

Year.	N.S.W.	Victoria.	Queensland.	South Aust.	West. Aust.	Tasmania.	C'wealth.
	£	£	£	£	£	£	£
1901 ...	23,154	26,225	10,397	15,815	1,432	2,288	79,311
1902 ...	25,540	22,958	11,728	17,525	3,231	2,488	83,470
1903 ...	26,459	16,430	7,294	17,978	4,052	2,465	74,678
1904 ...	25,762	16,278	6,395	7,756	5,528	1,359	63,078
1905 ...	25,262	17,117	5,055	7,481	7,205	2,650	64,770
1906 ...	26,764	21,444	6,803	7,663	7,931	2,650	73,255
1907 ...	33,568	22,322	9,610	8,006	7,940	2,418	83,864
1908 ...	51,814	26,839	10,720	7,856	9,264	2,215	108,708

The figures in the preceding table represent an expenditure of about 6d. per head of the population of the Commonwealth, as compared with 12s. 7d. per head spent on primary education, and clearly shew that technical education has not attained its proper place in the educational organisation of Australia.

§ 6. Diffusion of Education.

1. **General Education.**—A rough indication of the state of education of the people is obtained at each Census under the three headings, "read and write," "read only," and "cannot read." The grouping of the whole population, exclusive of aborigines, in these three divisions is given at each Census since 1861:—

EDUCATION AT CENSUS PERIODS, 1861 to 1901.

State.		1861.	1871.	1881.	1891.	1901.
N.S. Wales ...	Read & write	188,543	296,741	507,067	835,562	1,071,935
	Read only...	46,024	56,391	49,372	43,539	29,728
	Cannot read	116,293	149,866	193,386	244,853	253,183
Victoria ...	Read & write	328,362	478,464	653,346	908,490	998,010
	Read only...	57,351	70,953	47,950	32,794	21,852
	Cannot read	152,915	180,781	160,270	198,556	181,208
Queensland ...	Read & write	17,152	74,940	136,436	276,381	376,294
	Read only...	3,680	12,080	13,657	14,618	11,737
	Cannot read	9,227	33,084	63,432	102,719	110,098
South Australia	Read & write	72,190	117,349	200,057	236,514	290,748
	Read only...	18,535	21,509	15,267	9,571	8,285
	Cannot read	36,105	46,768	64,541	74,346	64,126
West. Australia	Read & write	7,683	14,166	19,684	34,254	150,099
	Read only...	1,301	2,717	2,430	2,061	3,107
	Cannot read	5,853	7,902	7,594	13,467	30,918
Tasmania ...	Read & write	48,282	55,941	74,966	103,138	133,579
	Read only...	13,136	13,946	9,606	6,287	3,907
	Cannot read	28,559	29,441	31,133	37,242	34,989
Commonwealth	Read & write	662,212	1,037,601	1,591,556	2,394,339	3,020,665
	Read only...	140,027	177,596	138,282	108,870	78,614
	Cannot read	348,952	447,842	520,356	671,183	674,522

The proportion in the Commonwealth of the various classes per 10,000 of the population is shewn below for each Census period :—

PROPORTION OF EDUCATED AND ILLITERATE PER 10,000 PERSONS, 1861 to 1901.

Division.	1861.	1871.	1881.	1891.	1901.
Read and write ...	5,752	6,239	7,073	7,543	8,004
Read only ...	1,217	1,068	615	343	208
Cannot read ...	3,031	2,693	2,312	2,114	1,788

2. Education of Children.—The figures in the preceding tables refer to the entire population of the Commonwealth, and as the age constitution of those dwelling in the various portions of Australia underwent considerable modifications during the period dealt with, a far more reliable test of the diffusion of education will be obtained by a comparison of the Census returns in regard to children of school age. For comparative purposes this has been taken to include all children in the group over five and under fifteen years of age, and the degree of education of these at each Census will be found below :—

EDUCATION OF CHILDREN AT CENSUS PERIODS, 1861 to 1901.

State.	1861.	1871.	1881.	1891.	1901.
N.S. Wales ...	(Read & write	34,040	68,776	121,735	196,240
	Read only ...	20,345	26,886	25,100	21,375
	Cannot read	25,472	32,924	41,663	48,580
Victoria ...	(Read & write	42,268	122,739	170,713	201,199
	Read only ...	25,518	39,636	25,249	15,656
	Cannot read	19,341	29,490	21,421	27,441
Queensland ...	(Read & write	2,156	12,698	33,317	62,402
	Read only ...	1,534	6,104	7,019	7,580
	Cannot read	1,629	6,015	9,615	16,257
South Australia	(Read & write	15,485	30,608	46,630	58,291
	Read only ...	8,748	12,432	7,926	4,618
	Cannot read	6,907	10,074	12,483	17,988
West. Australia	(Read & write	1,333	3,218	4,418	6,910
	Read only ...	226	617	1,260	933
	Cannot read	1,015	1,795	1,593	2,348
Tasmania ...	(Read & write	11,919	17,335	17,188	24,007
	Read only ...	2,848	4,143	4,108	2,974
	Cannot read	4,581	6,663	6,606	8,829
Commonwealth	(Read & write	107,201	255,374	394,001	549,049
	Read only ...	59,219	89,818	70,662	53,136
	Cannot read	58,945	86,961	93,381	121,443

In the case of Tasmania full details for the years 1861 and 1871 are not available, and the figures for those years are approximate. The variation in degree of education will be more readily seen by reducing the foregoing figures to the basis of proportion per 10,000, and the results so obtained are embodied in the following table, a glance at which is sufficient to demonstrate the remarkable strides that at least the lower branches of education have made since 1861. In that year, only 45 per cent. of the children of school age could read and write, while 30 per cent. were illiterate. The returns for 1901 shew that the proportion of those who could read and write had increased to over 80 per cent., while the totally ignorant had declined by fully one-half :—

**EDUCATION OF CHILDREN (AGES 5 to 15) PER 10,000 AT CENSUS PERIODS,
1861 to 1901.**

State.		1861.	1871.	1881.	1891.	1901.
N.S. Wales ...	(Read & write	4,263	5,349	6,458	7,372	7,662
	Read only...	2,547	2,091	1,332	803	486
	Cannot read	3,190	2,560	2,210	1,825	1,852
Victoria ...	(Read & write	4,851	6,397	7,853	8,236	8,526
	Read only...	2,929	2,066	1,162	641	473
	Cannot read	2,220	1,537	985	1,123	1,001
Queensland ...	(Read & write	4,053	5,116	6,670	7,236	7,942
	Read only...	2,884	2,460	1,405	879	495
	Cannot read	3,063	2,424	1,925	1,885	1,563
South Australia	(Read & write	4,973	5,763	6,956	7,206	7,790
	Read only...	2,809	2,341	1,182	571	474
	Cannot read	2,218	1,896	1,862	2,223	1,736
West Australia	(Read & write	5,179	5,716	6,076	6,780	7,775
	Read only...	878	1,096	1,733	916	557
	Cannot read	3,943	3,188	2,191	2,304	1,668
Tasmania ...	(Read & write	6,160	6,160	6,160	6,704	7,620
	Read only...	1,472	1,472	1,472	830	416
	Cannot read	2,368	2,368	2,368	2,466	1,964
Commonwealth	(Read & write	4,757	5,910	7,061	7,588	7,984
	Read only...	2,628	2,078	1,266	734	481
	Cannot read	2,615	2,012	1,673	1,678	1,535

3. Education as shewn by Marriage Registers.—Another common method of testing the spread of education is to compare the number of mark signatures with the total number of persons married during each year of a series. The percentage of males and females signing with a mark to the total persons married in the Census years 1861 to 1901, and during each of the last six years, was as follows. The figures refer to marriages in the Commonwealth in respect of which information was obtainable:—

ILLITERAC AS SHEWN BY MARRIAGE SIGNATURES, 1861 to 1908.

Year.	Proportion Signing with Marks of Total Persons Married.						
	Males.	Females.	Total.	Year.	Males.	Females.	Total.
	per cent.	per cent.	per cent.		per cent.	per cent.	per cent.
1861 ...	18.50	30.69	24.60	1903 ...	1.17	1.02	1.10
1871 ...	10.55	16.40	13.49	1904 ...	0.95	0.91	0.93
1881 ...	4.34	6.78	5.56	1905 ...	0.91	0.93	0.92
1891 ...	2.27	2.40	2.34	1906 ...	0.92	0.86	0.89
1901 ...	1.35	1.29	1.32	1907 ...	0.81	0.70	0.76
1902 ...	1.21	1.11	1.16	1908 ...	0.71	0.73	0.72

The table shews that there has been a large diminution in illiteracy, and judging from the figures for the last few years the proportion bids fair to practically disappear. Up to 1891 there was a higher proportion of illiteracy amongst females, but from 1901 onwards, generally speaking, the opposite condition prevailed.

§ 7. Miscellaneous.

1. **Scientific Societies.**—(a) *Royal Societies.* Despite the trials and struggles incidental to the earlier years of the history of Australia, higher education and scientific advancement were not lost sight of. Thus the origin of the Royal Society of New South Wales dates as far back as 1821, when it was founded under the name of the Australian Philosophical Society, Sir Thomas Brisbane being its first president. In 1856 it was known as the Philosophical Society of New South Wales. Its present title dates from 1866. Some of the papers of the old Philosophical Society were published in 1825 under the title of "Geographical Memoirs of New South Wales," and contain much that is interesting in regard to the early history of Australia. The first volume of the Transactions of the Royal Society of New South Wales was issued in 1867, the title of the series being altered to Journal in 1876. Up to the end of 1908 forty-six volumes had been published. The exchange list comprises 434 kindred societies. At the present time the library contains about 20,000 volumes and pamphlets, valued at £7500. Since 1874 the receipts from subscriptions reached over £21,000. Government grants since 1877 totalled about £12,800.

The Royal Society of Victoria dates from 1854, in which year the Victorian Institute for the Advancement of Science and the Philosophical Society of Victoria were founded. These were amalgamated in the following year under the title of the Philosophical Institute of Victoria, while the society received its present title in 1860. The first volume of its publications dates from 1855. The earlier publications dealt largely with Physics, later on Biology became prominent, while at present the greater number of papers deal with Geology. Up to 1908 fifty volumes of publications had been issued. The Society exchanges with 328 kindred bodies. The constitution of the society states that it was founded "for the promotion of art, literature, and science," but for many years past science has monopolised its energies. The library contains about 8000 volumes. Since its inception the society has received about £11,200 in annual subscriptions, while Government aid has been given to the amount of about £9600.

The inaugural meeting of the Royal Society of Queensland was held on the 8th January, 1884, under the presidency of the late Sir A. C. Gregory. The society was formed "for the furtherance of the natural and applied sciences, especially by means of original research." Shortly after its formation it received an addition to its ranks by the amalgamation with it of the Queensland Philosophical Society, which was started at the time when Queensland became a separate colony. At latest date the members numbered 103; publications issued, 22 volumes; library, 3500 volumes; societies on exchange list, 103. Up to 1908 total subscriptions reached about £1700.

The present Royal Society of South Australia grew out of the Adelaide Philosophical Society, which was founded in 1853, its object being the discussion of all subjects connected with science, literature and art. Despite this programme, the tendency of the papers was distinctly scientific, or of a practical or industrial nature. With the advent of the late Professor Tate the sphere of activity of the society was considerably enlarged. Permission to assume the title of "Royal" was obtained in 1879, the society thenceforward being known as "The Royal Society of South Australia." In 1903 the society was incorporated. Receipts in 1908 were £362, the Government endowment being £233. Up to 1908 the society had issued thirty-two volumes of proceedings and two volumes of memoirs. The exchange list numbers about 160.

The Royal Society of Tasmania, for horticulture, botany, and the advancement of science, dates from 14th October, 1843, although Sir John Franklin had started a scientific society as early as 1838. The names of Captains Ross and Crozier, of H.M.S. *Erebus* and *Terror*, appear in the list of the first corresponding members. The society,

which, since 1844, has published annual volumes of proceedings, possesses 140 members, exchanges with 75 kindred bodies, and has a library containing about 3000 volumes.

(b) *Other Scientific Societies.* The Australasian Association for the Advancement of Science, founded in 1888, has its headquarters in Sydney. Its receipts to date were about £10,500, including Government aid to the amount of £3000. The library contains 4000 volumes, valued at £400. Up to date eleven volumes of proceedings have been issued. The exchange list numbers 286. The Linnean Society of New South Wales, with headquarters in Sydney, founded in 1875, possesses a library of 9000 volumes, valued at £5000. Up to date thirty-four volumes of proceedings have been issued. Exchanges number 177. This society maintains four investigators engaged in research work, and owes its development almost entirely to the benefactions of Sir William Macleay. The British Astronomical Association has a branch in Sydney, and in some of the States the British Medical Association has branches.

The principal scientific society in Western Australia is the West Australian Natural History Society, with which is incorporated the Mueller Botanic Society, founded in July, 1897. The objects of this association are the study of natural history, promoted by periodical meetings, field excursions, and the issue of reports of proceedings. Government aid in 1906 amounted to £75, and in 1907 to £15. Since its establishment the society has issued sixteen journals of proceedings. The exchange list numbers forty-one.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation, particulars respecting which are not at present available.

2. Libraries.—As far as can be ascertained the total number of libraries in the Commonwealth at the latest available date was about 1500, and the number of books contained therein is estimated at nearly three millions. In each of the capital cities there is a well-equipped Public Library, the Melbourne institution especially comparing very favourably with similar institutions in other parts of the world. The following statement gives the number of volumes in the Public Library of each city:—

METROPOLITAN PUBLIC LIBRARIES.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Sydney ...	201,827	29,808	9,108	240,743
Melbourne ...	181,021	25,707	...	206,728
Brisbane ...	35,573	...	...	35,573
Adelaide ...	67,933	24,640	...	92,573
Perth ...	72,893	5,032	...	77,925
Hobart ...	16,363	...	...	16,363

The Launceston Institute in Tasmania possesses a library of 27,000 volumes.

The number of libraries in receipt of State or municipal aid, together with the estimated number of books contained therein, is given below for each State:—

SUBSIDISED LIBRARIES AND NUMBER OF BOOKS THEREIN.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.
Number of suburban and country libraries ...	410	444	181	183	208	37
Estimated number of books	806,548	956,388	213,684	417,083	168,419	106,232

The figures in the above table can be taken only as approximations, as in many instances returns were not received from various institutions.

3. Museums.—The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing a fine collection of the usual objects to be met with in kindred institutions, the Museum contains a very valuable and complete set of specimens of Australian fauna. The cost of construction of the building was £59,000. The number of visitors to the institution last year was 239,675, and the average attendance on week-days 691, and on Sundays 874. The expenditure for 1908 amounted to £7777, of which £5547 was absorbed by salaries and allowances, and £2230 by purchases and miscellaneous. There is a valuable library attached to the Museum. Representative collections, illustrative of the natural wealth of the country, are to be found in the Agricultural and Forestry Museum, and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids in country schools. The "Nicholson" Museum of Antiquities, and the "Macleay" Museum of Natural History, connected with the University, are also accessible to the public. There is a fine Technological Museum in Sydney, with branches in five country centres, the metropolitan institution containing over 100,000 specimens. Valuable research work has been undertaken by the scientific staff in connection with oil and other products of the eucalyptus. The average attendance of the public at the Technological Museums during the last five years was well over 200,000.

The National Museum at Melbourne, devoted to Natural History, Geology, and Ethnology, is located in the Public Library building. The expenditure for specimens, furniture, etc., in 1908 was £750, and salaries and wages £2456. The Industrial and Technological Museum, opened in 1870, contains upwards of 55,000 specimens. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. Well equipped museums of mining and geological specimens are established in connection with the Schools of Mines in the chief mining districts.

The Queensland Museum dates from the year 1871, but the present building was opened in January, 1901. Since its inauguration the Government has expended on the institution a sum of £68,476, of which buildings absorbed £16,607, purchases £21,667, and salaries £30,202. The number of visitors during the year was 59,783, of whom 21,918 visited the institution on Sundays. The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and Brisbane, opened in 1892. The visitors during the year numbered 21,071. The total expenditure on the institution up to the end of 1908 was £5716, of which £2844 was absorbed by buildings.

Under the Public Library Act of 1884 the South Australian Institute ceased to exist, and the books contained therein were divided amongst the Museum, Public Library, and Art Gallery of South Australia, and the Adelaide Circulating Library. The Museum was attended by 75,740 visitors in 1908.

The latest available returns shew that the Western Australian Museum contains altogether 54,000 specimens of an estimated value of £54,000. The Museum is housed in the same building as the Art Gallery, and the visitors to the combined institutions during the year numbered 157,000. The expenditure totalled £3933, of which salaries absorbed £1855.

There are two museums in Tasmania—The Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston, both of which contain valuable collections of botanical and mineral products. The Tasmanian Museum received aid from the Government during last year to the extent of £650.

4. Art Galleries.—Information regarding the State collections of objects of art in the various capitals is in some cases very meagre, while the method of presentation does not admit of any detailed comparisons being made. The Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Up to July, 1909, the cost of construction of the present building was £94,000. The contents, which are valued at £136,000, comprise 359 oil paintings, 367 water colours, 510 black and white, 150 statuary

and bronzes, and 309 ceramics, works in metal and miscellaneous. During 1908 the average attendance on week days was 592, and on Sundays 2066. The expenditure in 1908 amounted to £3100.

The National Gallery at Melbourne at the end of 1908 contained 511 oil paintings, 3558 objects of statuary, and 13,762 water-colour drawings, engravings, and photographs. The Gallery is situated in the same building as the Museum and Public Library, the total cost of construction being £229,000.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2000 in the purchase of pictures, which were exhibited in the Public Library building in 1882. The liberality of private citizens caused the Gallery to rapidly outgrow the accommodation provided for it in 1889, at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir T. Elder, the Government erected the present building, which was opened in April, 1900. The Gallery also received a bequest of £16,500 in 1903 from the estate of Dr. Morgan Thomas. At the latest available date there were in the Gallery 209 oil paintings, 124 water colours, 162 black and white, 103 engravings and etchings, 24 statuary, and numerous miscellaneous works in metal, etc., the whole being valued at £47,000. Building and site are valued at upwards of £31,000. Visitors during the year 1908 numbered 93,984.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, the building and site being valued at £60,000. The collection comprises 80 oil paintings, 32 water colours, 117 engravings and black and white, 227 statuary, and miscellaneous metal works, etc., of a total value of £12,000. During last year the visitors averaged 137 on week days and 329 on Sundays.

In Tasmania the Art Gallery at Hobart was opened in 1887. Its present contents consist of 96 paintings and 81 etchings and black and white drawings. Buildings and site are valued at £30,000. The number of visitors during the year on week days averages 62,000, and on Sundays 30,000.

The Art Gallery at Launceston was erected in 1888 at a cost of £5000, and opened on the 2nd April, 1901. Only a small proportion of the contents belongs to the Gallery, the bulk of the pictures being obtained on loan. At latest date there were on view 80 oil paintings and 44 water colours valued at £5000. The total value of buildings and site is estimated at £12,100. The average annual attendance is 36,000, and for Sundays 10,000.

5. State Expenditure on all Forms of Educational Effort.—The expenditure from the Consolidated Revenue in each State on all forms of educational and scientific activity during each of the last five financial years was as follows:—

EXPENDITURE ON EDUCATION, SCIENCE, AND ART, 1904-5 to 1908-9.

State.	1904-5.	1905-6.	1906-7.	1907-8.	1908-9.
	£	£	£	£	£
New South Wales ...	916,046	934,634	941,654	1,055,197	1,104,077
Victoria ...	787,836	810,850	842,071	872,655	925,368
Queensland ...	324,502	338,426	366,635	399,291	423,080
South Australia ...	195,648	199,628	193,346	210,712	238,376
Western Australia ...	214,733	230,573	217,036	219,176	221,377
Tasmania ...	72,435	68,163	68,777	73,242	81,182
Commonwealth ...	2,511,200	2,582,274	2,629,519	2,830,273	2,993,460

The expenditure for 1908-9 is equivalent to about 14s. 2d. per head of population in the Commonwealth.