#### 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 No. I. and No. II. 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. Generally speaking, the primary system is fairly 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 The orientation, lighting, and ventilation of school with their recommendations. buildings are being modernised. In all of the States periodical medical inspection of the children is in force. (A detailed statement of the work being done in this direction will be found in the chapter dealing with Public Hygiene.) 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

Universities have been in existence for some time in New South Wales, Victoria, South Australia, and Tasmania. The University of Queensland was opened in March, 1911, and a University will shortly be founded in Western Australia.

more effective co-ordination of the entire educational activities of the States. 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. It may be noted further, that, while the bulk of the primary education, and the whole of the University education is under the control of the State, intermediate secondary education is largely in private hands. There are, of course, some excellent State higher schools, together with semi-private subsidised grammar schools, but a fully co-ordinated scheme of public education has yet to be created. The various Departments of Public Instruction are virtually departments controlling primary education, though they are associated more or less with the Universities and with technical education.

## § 2. State Schools.

- 1. Introductory.—The State schools, or, as they are sometimes termed, the "public" schools, of the Commonwealth comprise all schools directly under State control, in contradistinction to the so-called "private" schools, the bulk of which, though privately managed, nevertheless cater for all classes of the community.
- 2. 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 1909:—

STATE SCHOOLS, TEACHERS, AND SCHOLARS, 1909.
(COMMONWEALTH.)

State.		 Schools.	Teachers.*	Enrolment.	Average Attendance.
New South Wales Victoria Queensland South Australia Western Australia Tasmania		 2,035   4,8 1,141   2,5 722   1,2 434   9	5,431 4,868 2,521 1,294 954 720	58     205,278       21     88,865       94     53,748       54     31,341	160,080 146,106 69,755 38,255 26,673 17,391
Commonwealth	•••	 7,787	15,788	624,236	458,260

<sup>\*</sup> 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 1899 to 1909:—

## ENROLMENT AND ATTENDANCE AT STATE SCHOOLS, 1891 to 1909.

(COMMONWEALTH.)

Year.	Total Population.	Enrolment.	Average Attendance.	Year.	Total Population.	Enrolment.	Average Attendance.
1891	3,240	561,153	350,773	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
1903	3,927	629,269	446,539	1909	4,374	624,236	458,260

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 although an upward tendency is evident in the figures for 1909. An examination of the graphs on pages 230 to 232, shewing birth-rate, will make it apparent that this is at least in part due to the diminished birth-rate of past years.

3. 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, 1896-1903, and the average attendance at State Schools for each year from 1903 to 1909:—

## COMPARISON OF BIRTHS AND SCHOOL ATTENDANCE. (COMMONWEALTH.)

Year.	New South Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Common- wealth.			
	TOTAL BIRTHS.									
1890-97 1891-98 1892-99 1893-1900 1894-1901 1895-1902 1896-1903	1' 1	281,918 274,512 267,015 259,963 254,419 250,622 246,485	116,600 115,126 114,310 114,208 114,117 114,356 112,103	83,068 81,674 80,344 78,951 77,356 75,804 73,745	18,606 22,013 25,401 29,007 32,613 36,722 41,048	38,894 38,661 38,364 38,263 37,977 38,210 38,500	849,365 839,527 829,978 822,041 815,664 813,780 807,139			
	· <del></del>	ATTENDA	ANCE AT	STATE SC	HOOLS.					
1908 1904 1905 1906 1907 1908	154,382 153,260 151,083 151,261 152,607 156,000 160,080	145,500 145,122 143,362 142,216 147,270 143,551 146,106	69,759 68,661 68,780 69,771 66,849 67,309 69,755	42,752 42,234 41,807 40,489 37,861 38,193 38,255	20,283 22,111 23,703 24,973 24,950 25,141 26,673	13,863 14,321 14,123 13,730 14,464 15,952 17,391	446,539 445,709 442,808 442,440 444,001 446,146 458,260			

4. 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.

- 5. 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.
- 6. Evening Schools.—Evening public schools have been in existence for many years in some of the States, but their progress has been uncertain. In New South Wales, at latest available date, there were 33 schools with an enrolment of 1099 and average attendance of 561; Victoria had nine schools with enrolment of 1194 and average attendance of 357; Queensland had evening continuation classes attended by 54 pupils; and Western Australia had two schools with an enrolment of 103 district students.
- 7. 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 or Junior University Examinations, are classed as Superior Schools. There were 145 of these schools in existence at the end of 1909, with an enrolment of about 93,000 scholars. 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 1909 of 1035 pupils, with an average attendance of 786. In twenty-five country centres the superior pupilic 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.

The Sydney Grammar School (not a "State" school in the ordinary acceptation of the term), which receives a State endowment of £1500 a year, had in 1909 a quarterly enrolment of 604 pupils and an average attendance of 574.

(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 to which teacher students are also admitted, are referred to in (8) hereafter. The enrolment of these High State Schools in 1909 was 1002, of whom 517 were girls.

- (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 1909 was 1218, and the average attendance 1079. From 1909 onwards the schools will be regularly examined by the Inspector-General of the Education Department.
- (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 1909 numbered 511. Of these 91 were student teachers, 135 were improving their general education prior to beginning work, 240 were studying for University examinations, and 45 were taking a commercial course. District High Schools were carried on in 1909 at twelve centres with a total attendance of 708 pupils.
- (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. During 1909 the upper classes of schools in the largest centres of population were brought together into central schools, in order to secure more economical and effective teaching, and it is intended that these central institutions shall form the nucleus of future high schools. A new secondary school with provision for science teaching is now being built in Perth. 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.
- 8. 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. In 1909, ninety-four teachers attended a summer school at the Hawkesbury Agricultural College for training in agriculture and nature study.

The subject of agricultural colleges and experimental farms is dealt with in the section relating to Agriculture. (See page 419.)

In addition to the regular courses of instruction given in the schools, the practice of carrying on "rural camps," where city school boys may gain some insight into the conditions of country life, has for some time been in successful operation. Within the last two years 129 city boys have gone on the land or joined Agricultural Colleges. Nine training school students were attached to the Hawkesbury Agricultural College during their second year's training, and are now being employed at principal schools in agricultural districts.

In Victoria what are termed Agricultural High Schools have been established at Warrnambool, Sale, Shepparton, Wangaratta, and Ballarat. 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. A Supervisor of agriculture reports and gives advice on the teaching of agriculture in the State Schools.

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 a departmental teacher of agriculture visits the schools and gives assistance in agricultural, horticultural, and nature study work. Short courses of instruction for teachers have been instituted at the Gatton College. 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. During the Christmas vacation in 1909 a training camp for teachers was held at the State experimental farm at Brunswick, in Western Australia, when some valuable work was done in nature study and agriculture, At some of the schools in this State there are experimental plots for elementary agricultural work.

9. Teachers in State Schools.—The distribution of the teaching staff in the State schools during the year 1909 was as follows:—

TEACHING	STAFF	IN	STATE	SCHOOLS,	1909.
	(COM	MO	NWEAL'	rn.)	

Gt at	Principal Teachers.		Assistants.		Pupil or Junior Teachers.		Sewing	Total.		
State.	Males.	Fem.	Males.	Fem.	Males.	Fem.	Mis- tresses.	Males.	Fem.	Total.
New South Wales Victoria Queensland South Australia Western Australia Tasmania	2,196 1,498 689 309 265 177	550 655 445 368 187 203	833 260 288 . 65 . 89 20	1,641 835 569 334 293 140	59 344 189 58 29 16	152 1,276 341 160 91 164	105 424 — 117 62	3,088 2,102 1,166 432 383 213	2,448 3,190 1,355 979 633 507	5,536 5,292 2,521 1,411 1,016 720
Commonwealth	5,134	2,408	1,555	3,812	695	2,184	708	7,384	9,112	16,496

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.

10. 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. At the end of 1909 there were 204 probationary students in their first year and 181 in their second year at the various district schools. It is hoped that the pupil-teacher, as such, will be extinct in a few years. In the meantime there were still as many as 211 employed at the end of 1909. 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 aquaintance with up-to-date ideas by attending Summer Schools, Rural Campschools, 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 1909 there were 156 men and 142 women 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, Wangaratta, and Ballarat 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 juniorteaching 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 re-opened in February, 1900, with an enrolment of fifty-seven students. By the 30th June, 1909, the number had increased to 120. 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 1909, 95 were departmental, 16 non-departmental students being trained in kindergarten methods, and 9 were non-departmental 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 in affiliation with the University of Queensland. 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. The school for infants at Kangaroo Point is, however, being specially staffed and equipped for training Kindergarten teachers. It is proposed to establish similar institutions at Rockhampton and Townsville.
- (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. At the present time three institutions are mainly concerned with the work of training teachers. Adelaide Observation School has a special class to assist young people desirous of becoming provisional teachers. Those who pass the prescribed examination receive practical training at the Model Provisional School attached to the Observation School. High School gives a three years course of educational and professional training. who complete the course may enter the Training College or take appointments as unclassified teachers. At the Training College those who enter for one year take a course of study leading to the infant teachers' or the primary teachers' certificate. Those who remain two years take the primary course in the first year, and in the second prepare for Sixty-one students were in attendance at the Training the diploma of education. College in 1909. Schools of instruction are also held at which provisional school teachers have opportunities of observing the latest methods, while an advisory teacher has been appointed to visit and help the teachers of the smaller schools.
- (v.) Western Australia. A training college for teachers was opened at Claremont in 1902. The original building provided accommodation for sixty students, but extensions were opened in 1908, and the number in training during 1909 was 88, including 23 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 1909 numbered 60, of whom 38 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 suitableness 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 qualify for the Diploma of Education at the Melbourne Training College.
- 11. School Savings Banks.—Returns shew that these institutions are in existence in three States. In New South Wales, there were 696 banks at the end of 1909, the deposits amounting to £24,208 and withdrawals to £24,811. Since their establishment in 1887, deposits totalled £349,578, and withdrawals £341,670. Of the latter sum £84,641 was placed to children's accounts in Savings Banks. In South Australia, 142 schools had 6075 depositors with £2926 to their credit, and in Western Australia, there were 117 school banks with 5206 depositors and £4041 at credit.
- 12. Expenditure on State Schools.—The net expenditure in each State on primary education during each year of the period 1901 to 1909 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 1909.

(COMMONWEALTH.)

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tasmania.	Cwlth.
	£	£	£	£	£	£	£
1901	623,734	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
1909	940,534	726,020	309,704	164,863	166,103	73,532	2,380,756

The expenditure per head of average attendance for each of the years given above will be found in the succeeding table. As the figures shew, Western Australia has the highest average, followed by New South Wales and Victoria, the lowest rate being in Tasmania.

## COST PER HEAD OF AVERAGE ATTENDANCE, STATE SCHOOLS, 1901 to 1909.

(COMMONWEALTH.)

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	6 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
1909	5 17 6	4 19 5	4 8 0	4 6 2	6 4 6	4 4 7	5 3 11

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

#### EXPENDITURE ON STATE SCHOOL BUILDINGS, 1901 to 1909.

(COMMONWEALTH.)

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	30,840	15,839	38,928	7,216	264,587
1908	146,715	106,983	44,333	22,726	34,299	8,659	363,715
1909	149,767	162,932	57,349	31,512	31,099	8,442	441,101

The total net cost and the net cost per scholar in average attendance during the year 1909 were as follows:—

#### NET TOTAL COST PRIMARY EDUCATION, 1909.

(COMMONWEALTH.)

Item.	N.S.W.	Vic.	Q'land.	S. Aust.	W. A.	Tas.	C'wlth.
Netcost of primary education, including buildings Per scholar in average attendance	£ 1,090,301 £6 16/3	£ 888,952 £6 1/8		£ 196,375 £5 2/8	£ 197,202 £7 7/10	£ 81,974 £4 14/3	

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

## § 3. Private Schools.\*

1. School Teachers, etc., in 1909.—The following table shews the number of private schools, together with the teachers engaged therein, and the enrolment and average attendance in 1909:—

<sup>\*</sup> Private Schools include all schools not wholly under State control. The term "private" though popularly applied is, of course, a misnomer.

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#### PRIVATE SCHOOLS, 1909.

(COMMONWEALTH.)

St	ate.		Schools.	Teachers.	Scholars Enrolled.	Average Attendance
New South Wales Victoria Queensland South Australia Western Australia		 	789 678 168 186 121	3,633 2,178 777 688 414	67,982 53,821 15,963 11,643 8,506	48,792 43,000* 13,658 9,200 7,209
Tasmania Commonwealth		  •	2,082	8,110	6,513	127,069

<sup>•</sup> Estimated.

The figures for Queensland include the returns from Grammar Schools, of which there are ten-six for boys and four for girls. These schools are governed by boards of trustees, partly nominated by Government, and partly by the subscribers to the funds. The trustees make regulations regarding the fees of scholars, the salaries of teachers, and generally for the management of the schools. Each school is endowed by the Government at the rate of £750 per annum together with an additional £250 to provide district scholarships, of which five were allotted to each school from 1st January, 1909.

2. Growth of Private Schools.—The enrolment and average attendance at private schools during 1891 and in each year of the period 1899 to 1909 are shewn below:

ENROLMENT AND ATTENDANCE AT PRIVATE SCHOOLS, 1891 to 1909. (COMMONWEALTH.)

Year	r.	Enrolment.	Average Attendance.	Year.		Enrolment.	Average Attendance.	
1891 1899		124,485 151,803	99,588 122,188	1904 1905		146,339 145,143	119,915 118,627	
1900 1901 1902		153,433 148,659	124,313 120,742	1906 1907		152,058 152,037	124,510 122,878	
1902		144,437 $147,135$	117,293 120,193	1908 1909		$152,399 \\ 164,428$	125,530 127,069	

In view of the growth in population during the period covered by the table the increase in enrolment and attendance does not afford room for much satisfaction. returns will no doubt in future be to some extent adversely affected by the development of the higher State schools alluded to in a preceding paragraph.

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 ægis 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 are now examined 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 bona 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. Free Kindergartens.

The following information regarding Free Kindergartens in the Commonwealth has been compiled from particulars supplied by the principals of the chief institutions in each State, except in the case of Victoria, the details for this State being furnished by the honorary secretary of the Free Kindergartens Union.

State.	No. of Schools.	Teachers.	Average Attendance of Children.	Number of Teachers in Training.
New South Wales (Sydney) (Newcastle) Victoria (Melbourne) Queensland (Brisbane) (Clermont) South Australia (Adelaide)	. 3 . 12 . 2 . 1	11 3 21 4 1 27	340 120 525 74 27 270	43 8 21 6 3 21
Total	. 30	67	1,356	102 ·

#### FREE KINDERGARTENS IN THE COMMONWEALTH, 1909.

At Brisbane, where two more schools are in course of formation, the training of teachers is undertaken by the Queensland Crèche and Kindergarten Association.

In Tasmania, schools were established in Hobart and Launceston at the end of 1910.

There are no free Kindergartens in Western Australia. It must, of course, be distinctly understood that the information given above refers to Kindergartens under private management, and is exclusive of institutions controlled by the Education Department of the various States.

#### § 5. Universities.

- Origin and Development.—The history of the foundation and progress of the
  four then existing 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 sixteen professors, five assistant professors, eighty-one lecturers and demonstrators. There are, in addition, fifty miscellaneous assistants in laboratories and three curators of museums.
- (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. 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 sixteen professors, forty-six lecturers and demonstrators, and thirteen honorary demonstrators. The Conservatorium of Music has a staff numbering twenty-five.

- (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 ten professors, twenty-five lecturers and ten assistant lecturers and demonstrators, exclusive of the staff at the Conservatorium, which also 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.
- (v.) University of Queensland. The Act to establish the University of Queensland was passed in 1909, and the first Senate was appointed on the 14th April, 1910. The University was opened on the 18th and lectures given on the 20th March, 1911, by professors of classics, chemistry, physics and mathematics, and engineering.
- (vi.) University of Western Australia. The University Commission in this State has recommended the establishment of a university somewhat on the lines of those in the Eastern States but with such amendments as would bring it as far as possible into accord with the most modern requirements. The Act establishing a University was passed on the 18th February, 1911. In addition to lectureships, it is proposed to open the institution with four professorships—modern literature and history, mathematics and physics, chemistry, and engineering and mining—while a chair in agriculture will be endowed by the generosity of Dr. Hackett.
- 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 1909:—

#### UNIVERSITIES-TEACHERS AND STUDENTS, 1909.

			Students attending Lectures.				
University.		Professors.	Lecturers.	Matriculated.	Non- matriculated. Total		
Sydney		21	81	924	350	1,274*	
Melbourne		16	53	i		998†	
Adelaide	•••	10	45	385	269	654‡	
Tasmania (Hobart)		3	7	53	62	115	

<sup>•</sup> Including 140 females. † Including 161 females, but excluding 8 male and 115 female music students. ‡ Including 128 females, but exclusive of 68 male and 323 female music students. 

| Including 54 females.

3. University Revenues.—The income of the Universities from all sources during the year 1909 was as follows:—

#### UNIVERSITIES.—REVENUE. 1909.

Universi	ty.	Government Grants.	Fees.	Other.	Total.
		 £	£	£	£
Sydney	•••	 15,845	22,459	30,692	68,996
Melbourne	•••	 19,250	21,286	973	41,509
Adelaide	•••	 7,195	9,776	5,755	22,726
Tasmania (Hobart)	•••	 4,150	1,037	125	5,312
•				1	

The column "Other" includes the receipts from private foundations. The extent to which the Universities have benefited by private munificence will be apparent from the following table:—

#### PRINCIPAL PRIVATE BENEFACTIONS TO AUSTRALIAN UNIVERSITIES.

University of Sy	dney.	University of Melb	ourne.	University of Adelaide.		
Donor.	Amount,	Donor.	Amount.	Donor.	Amount.	
J. H. Challis Sir P. N. Russell Thos. Fisher Edwin Dalton Hugh Dixson Hon. SirW. Macleay Mrs. Hovell Thos. Walker Other donations	0,000	Sir Samuel Wilson James Stewart Sir Fr'ncis Ormond John Hastie Robert Dixson David Kay Henry Dwight Wm.Thos.Mollison Other donations	25,624 20,000 19,140 10,837 5,764 5,000	Sir Thos. Elder R. Barr Smith Sir W. Hughes Hon. J. H. Angas Other donations	£ 98,760 8,000 20,000 10,000 13,580	
Total £	492,490	Total £	164,899	Total £	150,340	

In addition to the above there were various other bequests to Sydney University—e.g., collection of Egyptian antiquities, etc., by Sir Charles Nicholson, and Natural History collection by Mr. Geo. Masters, while the building for the Natural History Museum was given by Sir W. Macleay. Numerous prizes and scholarships have also been given to the various colleges. In Melbourne, Sir Francis Ormond's benefactions to Ormond College amounted to about £108,000. Private benefactions to the University of Tasmania and the newly-established University of Queensland amount to £1445 and £2192 respectively.

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 arranged for courses of lectures in Queensland and Western Australia. In 1909 the average attendance at extension lectures in New South Wales was 479.

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 in 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.

#### § 6. 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 function 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—at Maitland in 1890; Newcastle 1896; Bathurst 1898; Broken Hill 1898; Albury 1899; and Goulburn 1902.

The enrolment in 1909 at technical classes throughout the State was as follows:--

65  92 130	48 184 284 45	Public Schools.	Total. 317 350 1,000
 92	184 284		350
92	284		
		202	1,000
130	15		
	40		282
587	1,030	90	3,060
185	705	l i	2,199
		!	139
179	687		1,984
	177		635
65	140		1,176
65	482		928
325	268	!	1,321
231	396	480	1,421
327	2,161	1,086	4,521
384	112	1,178	1,909
	185  179  65 65 325 231 327	185 705 179 687 177 65 140 65 482 325 268 231 396 327 2,161	185     705        179     687        177         65     140        65     482        325     268        231     396     480       327     2,161     1,086

TECHNICAL CLASSES, NEW SOUTH WALES, 1909.

Classes in various subjects are also held at other country centres and at a large number of public schools. Technical Day Schools have been established at the Central College in Sydney, and at Newcastle and Goulburn. The course of instruction covers two years and is designed to prepare young students for admission to the Engineering, Mining, or Architecture classes at the College. 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 419.)

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. At the 30th June, 1909, there were seventeen technical schools receiving aid from the State. These were as follows:—

TECHNICAL	EDUCATION.	VICTORIA	1000

Institution.				Receipts.	Enrolment
				£	
Melbourne Working Men's College	•••			10,000	2050
Ballarat School of Mines		•••		4,000	1256
Bendigo School of Mines				2,300	679
*Geelong Gordon Technical College		•••		1,000	451
Bairnsdale School of Mines	•••	•••		750	159
Maryborough Technical College				750	308
Stawell School of Mines		•••		750	175
Castlemaine Technical School				550	188
Daylesford Technical School				350	128
Melbourne College of Domestic Econo	my.			340	105
Sale Technical School		•••		400	119
Horsham Working Men's College				350	133
*Eastern Suburbs Technical College				300	222
Echuca School of Arts				300	124
Kyneton Technical School				250	97
Nhill School of Arts				200	63
Warrnambool School of Arts		•••		150	24

<sup>\*&#</sup>x27;January to June.

Of the above schools, seven afford instruction in Science, Art, and Trade subjects; two in Art and Science; four in Art and Trade; three in Art; and one in Trade.

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, by providing for the instruction of selected pupils in various technical subjects. The sixteen colleges open in 1909 were situated at Bowen, Central (with branches at South Brisbane and West End), Bundaberg, Cairns, Charters Towers, Gympie, Herberton, Ipswich, Mackay, Maryborough, Mount Morgan, Rockhampton, Sandgate, Toowoomba, Townsville, and Warwick.

A technical day-school has been established at Brisbane for the purpose of preparing students for the college courses in the commercial, wool, engineering, mining, and domestic departments.

It is proposed to affiliate the Central Technical College with the University. The average enrolment per term in the various departments of Queensland technical colleges is given hereunder for the year 1909:—

Department.		Enrolment.	Department.	Enrolment.
Art Commerce Trades Mathematics Physics Chemistry and Metallurg Electricity	  у	516 882 192 319 67 162 70	Geology, Mineralogy, Mining Mechanical Engineering Agriculture Health and Sanitary Science Domestic Science and Art Revisal	36 436 55 127 910 166

TECHNICAL CLASSES, QUEENSLAND, 1909.

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 in addition Schools of Mines at Moonta, Port Pirie, Kapunda, and Gawler. A School of Design, Painting, and Technical Arts has been established in Adelaide, with branches at Port Adelaide and Gawler.

The enrolment at the larger classes was as follows:-

Department.	Enrolment.	. Department.	'	Enrolment.
Applied Mechanics Carpentry Chemistry and Physics Domestic Sciences Electrical Engineering	146 313 330 728 107	Fitting and Turning Mathematics Metallurgy, Mining, etc. Wool Classing	•••	284 330 100 205

TECHNICAL CLASSES, SOUTH AUSTRALIA, 1909.

6. Western Australia.—A technical school was established at Perth in 1900, and since its opening has progressed rapidly. Extensive additions to the buildings were made in 1909. 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. The number of individual students at each college during the last term of 1909 was as follows:—

TECHNICAL CLASSES, WESTERN AUSTRALIA, 1909.

	College	) <b>.</b>		Students.	College.		 Students
Perth	•••		•••	431	Coolgardie		 62
Boulder		•••		203	Kalgoorlie		 76
Menzies				15	Fremantle		 232
Claremont	•••	•••		23	Midland Junction	•••	 54
Murchison				28			

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.

Particulars regarding the schools are given hereunder:-

TECHNICAL CLASSES, TASMANIA, 1909.

	s	chools.			Government Aid.	Classes.	Enrolment.	Attend- ance.
					£	No.	No.	No.
Hobart					850	23	263	65
Launceston		•••	•••		850	12	322	42
Beaconsfield	•••		•••		250	. 11	89	67
Zeehan		•••		•••	700	21	120	24

The table hereunder shews the enrolment and attendance at technical schools and classes in the Commonwealth during 1909:—

ENROLMENT AND ATTENDANCE AT TECHNICAL SCHOOLS, 1909.

(COMMONWEALTH.)

	State.		Enrolment	Average Attendance	Technical Classes at State Schools.		
	Statu.				Attendance	Enrolment Av. Attend	
New South Wales	•••			18,206	10,125	3,036	1,341
Victoria			•••	7,599	3,963	285	
Queensland	•••			5,608	3,115	•••	
South Australia		•••		4,179	1,381	306	
Western Australia	•••		٠	1,574	*	•••	
Tasmania	•••			794	248	•••	

<sup>•</sup> Not available.

8. Expenditure on Technical Education.—The expenditure on technical education in each State during the period 1905 to 1909 is shewn below:—

#### EXPENDITURE ON TECHNICAL EDUCATION, 1905 to 1909.

(COMMONWEALTH.)

Year.	N.S.W.	Victoria.	Queensland.	South Aust.	West. Aust.	Tasmania.	C'wealth.
1905 1906 1907 1908 1909	£ 25,262 26,764 33,568 51,814 61,452	£ 17,117 21,444 22,322 26,839 27,039	£ 5,055 6,803 9,610 10,720 13,589	£ 7,481 7,663 8,006 7,856 12,742	£ 7,205 7,931 7,940 9,264 9,422	£ 2,650 2,650 2,418 2,215 3,209	£ 64,770 73,255 83,864 108,708 127,453

The figures in the preceding table represent an expenditure of about 7d. per head of the population of the Commonwealth, as compared with over 11s. per head spent on maintenance for primary education, and clearly shew that technical education has not attained its proper place in the educational organisation of Australia.

### § 7. 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 for each Census since 1861:—

#### EDUCATION AT CENSUS PERIODS, 1861 to 1901.

(COMMONWEALTH.)

State.	1861.	1871.	1881.	1891.	1901.
(Read & write	188,543	296,741	507,067	835,562	1,071,935
N.S. Wales $\dots \mid \text{Read only} \dots \mid$	46,024	56,391	49,372	43,539	29,728
(Cannot read	116,293	149,866	193,386	244,853	253,183
(Read & write	328,362	478,464	653,346	908,490	998,010
Victoria Read only	57,351	70,953	47,950	32,794	21,852
Cannot read	152,915	180,781	160,270	198,556	181,208
(Read & write	17,152	74,940	136,436	276,381	376,294
Queensland Read only	3,680	12,080	13,657	14,618	11,737
Cannot read	9,227	33,084	63,432	102,719	110,098
(Read & write	72,190	117.349	200,057	236,514	290,748
South Australia Read only	18,535	21,509	15,267	9,571	8,283
(Cannot read	36,105	46,768	64.541	74,346	64,126
(Read & write	7,683	14,166	19,684	34,254	150,099
West. Australia Read only	1,301	2,717	2,430	2,061	3,107
Cannot read	5,853	7,902	7,594	13,467	30,918
(Read & write	48,282	55,941	74,966	103,138	133,579
Tasmania Read only	13,136	13,946	9,606	6,287	3,907
· (Cannot read	28,559	29,441	31,133	37,242	34,989
		ļ_,			
(Read & write	662,212	1,037,601	1,591,556	2,394,339	3,020,665
Commonwealth 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.

(COMMONWEALTH.)

Division.		1861. 1671.		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.

(COMMONWEALTH.)

State.	1861.	1871.	1881.	1891	1901.
N.S. Wales Read & write Read only	20,345	68,776 26,886	121,735 25,100	196,240 21,375	251,187 15,934
(Cannot read (Read & write	42,268	32,924 122,739	41,663 170,713	48,580 201,199	60,734 236,515
Victoria Read only Cannot read	19,341	39,636 29,490	25,249 21,421	15,656 27,441	13,128
Queensland $\begin{cases} \text{Read \& write} \\ \text{Read only} \\ \dots \end{cases}$	1,534	12,698 6,104	33,317 7,019	62,402 7,580	95,635 5,955
(Cannot read (Read & write	15,485	6,015 30,608	9,615 46,630	16,257 58,291	18,827 69,451
South Australia Read only (Cannot read	6,907	12,432 10,074	7,926 12,483	4,618 17,988	15,480
West. Australia Read & write	226	3,218 617 1,795	4,418 1,260 1,593	6,910 933 2,348	25,326 1,815 5,431
(Cannot read Read & write Tasmania Read only	11,919	17,335 4,143	17,188 4,108	24,007 2,974	32,890 1,795
Cannot read		6,663	6,606	8,829	8,475
(D - 1 0 - 1)	107 001	255.054	204.001	540.040	F11 004
Commonwealth Read & write	59,219	255,374 89,818	394,001 70,662	549,049 53,136	711,004
(Cannot read	58,945	86.961	93,381	121,443	136,712

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 47 per cent. of the children of school

age could read and write, while 26 per cent. were illiterate. The returns for 1901 shew that the proportion of those who could read and write had increased to nearly 80 per cent., while the totally ignorant had declined by nearly one-half.

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

(COMMONWEALTH.)

State.	1861.	1871.	1881.	1891.	1901.
(Read & write	4,263	5,349	6,458	7,372	7,662
N.S. Wales Read only	2,547	2,091	1,332	803	486
(Cannot read	3,190	2,560	2,210	1,825	1,852
(Read & write	4,851	6.397	7,853	8,236	8,526
Victoria Read only	2,929	2,066	1,162	641	473
(Cannot read	2,220	1,537	985	1,123	1,001
(Read & write	4,053	5,116	6,670	7,236	7,942
Queensland Read only	2,884	2,460	1,405	879	495
(Cannot read	3,063	2,424	1,925	1,885	1,563
(Read & write	4,973	5,763	6,956	7,206	7,790.
South Australia   Read only	2,809	2,341	1,182	571	474
(Cannot read	2,218	1.896	1,862	2,223	1,736
(Read & write	5,179	5,716	6,076	6,780	7,775
West Australia   Read only	878	1,096	1,733	916	557
(Cannot read	3,943	3,188	2,191	2,304	1,668
(Read & write	6,160	6,160	6,160	6,704	7,620
Tasmania Read only	1,472	1,472	1,472	830	416
(Cannot read	2,368	2,368	2,368	2,466	1,964
· (Read & write	4,757	5,910	7,061	7,588	7,984
Commonwealth 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 seven years, was as follows. The figures refer to marriages in the Commonwealth in respect of which information was obtainable.

ILLITERACY AS SHEWN BY MARRIAGE SIGNATURES, 1861 to 1909. (COMMONWEALTH).

Year.		Proportio	n Signing wi	th Marks	of T	Total Person	s Married.	
rear.	Males.	Females.	Total.	Year.		Males.	Females.	Total.
1861 1871 1881 1891 1901	10.58 4.34 2.27 1.35	per cent. 30.69 16.40 6.78 2.40 1.29 1.02	per cent. 24.60 13.49 5.56 2.34 1.32 1.10	1904 1905 1906 1907 1908 1909		per cent. 0.95 0.91 0.92 0.81 0.71 0.65	per cent. 0.91 0.93 0.86 0.70 0.73 0.62	per cent. 0.93 0.92 0.89 0.76 0.72 0.64

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.

#### § 8. 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 Philosophical Society of Australasia, Sir Thomas Brisbane being its first president. Scientific work was fitfully carried on by means of a society whose name varied as the years rolled on. It was called the Australian Philosophical Society in 1850. In 1856 the old Australian Society merged into a resuscitated Philosophical Society of New South Wales, and its papers were published up to 1859 in the Sydney Magazine of Science and Art (2 vols. 1858-9). 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," (Barron Field) and contain much that is interesting in regard to the early history of Australia. One volume containing the Transactions of the Philosophical Society of New South Wales (1862-65) was published in 1866. The journal of the Society did not begin to bear a serial number, however (vol. 1), until the year 1867. 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 1909 forty-three 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 £35,000. Government grants since 1877 totalled about £13.250.

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 a large number of papers deal with Geology. Up to 1910 fifty-two 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 £14,000 in annual subscriptions, while Government aid has been given to the amount of about £9800.

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 106; publications issued, 23 volumes; library, 3700 volumes; societies on exchange list, 105. Up to 1909 the 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 1909 were £433, the Government endowment being £229. Up to 1909 the society had issued thirty-three volumes of proceedings and three 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 £11,000, 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 Natural History and Science Society of Western Australia. This society has grown out of the Mueller Botanic Society, founded in July, 1897. The objects of the society are the study of natural history and pure science, promoted by periodical meetings and field excursions, the maintenance of a library, and the issue of reports of proceedings. It numbers at present 110 members whose subscriptions form its main source of revenue. Government aid in the past has ranged from £7 to £75 per annum, the subsidy paid in 1910 being £12 10s. Since its establishment the society has issued eighteen journals of proceedings. Its publications are exchanged with numerous institutions at home and abroad.

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.

		Nı				
City		Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	Total.	
Śydney		208,682	•••	9,791	218,473	
Melbourne		188,695	26,825		215,520	
Brisbane		35,573	•••	•••	35,573	
Adelaide		71,534	25,476		97,010	
Perth		78,380	6,228		84,608	
Hobart		16,363	•••	•••	16,363	

The maintenance and control of the lending branch of the Public Library at Sydney were transferred in 1909 to the Municipal Council. At the end of December the books numbered 26,313.

The Mitchell Library in Sydney consists of 60,000 volumes and pamphlets, principally relating to Australasia, bequeathed by Mr. D. S. Mitchell, together with an endowment

of £70,000. The testator stipulated that the regulations of the British Museum were to be adopted as far as practicable. Hence the library is the resort of specialists.

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:—

SURSIDISED	LIDDADIES	AND	NUMBED .	ΛE	DOORE	THEREIN
SURSIDISED	LIBRARIES	AND	NUMBER	Ur.	BUUKS	INEREIN.

Particulars.	N.S.W.	Vic	Q'land.	S. Aust.	W. Aust	Tas.
Number of libraries	435	436	202	195	• 225	27
Estimated number of books	628,000	994,000	296,000	448,000	191,000	117,000

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 214,068, and the average attendance on week-days 623, and on Sundays 1000. The expenditure for 1909 amounted to £11,310, of which £5931 was absorbed by salaries and allowances, and £5379 by purchases and miscellaneous. A valuable library containing nearly 16,000 volumes is 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, the "Macleay" Museum of Natural History, and the Museum of Normal and Morbid Anatomy, connected with the University, and the National Herbarium and Botanical Museum at the Sydney Botanic Gardens, are also accessible to the public. 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 1909 was over 220,000.

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 1909 was £1000, 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 £69,589, of which buildings absorbed £16,615, purchases £21,969, and salaries £31,005. The number of visitors during the year was 73,205, of whom 27,626 visited the institution on Sundays. The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and Brisbane, opened in 1892. The total expenditure on the institution up to the end of 1909 was £6054, of which £2847 was spent on 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 1909.

The latest available returns shew that the Western Australian Museum contains altogether 47,000 specimens of an estimated value of £57,000. The Museum is housed in the same building as the Art Gallery, and the visitors to the combined institutions during the year numbered 56,000. The expenditure totalled £3556, of which salaries absorbed £1944.

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 £500.

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 360 oil paintings, 369 water colours, 511 black and white, 150 statuary and bronzes, and 314 ceramics, works in metal and miscellaneous. During 1909 the average attendance on week days was 557, and on Sundays 1918. The expenditure in 1909 amounted to £3123.

The National Gallery at Melbourne at the end of 1909 contained 518 oil paintings, 3565 objects of statuary, bronzes and ceramics, and 13,870 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. At the end of 1909 the Ballarat Art Gallery contained 217 oil paintings and 155 water colors, etc., while there are some valuable works of art in the smaller galleries at Bendigo, Geelong, and Warrnambool.

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, and of £3000 in 1907 from Mr. David Murray. At the latest available date there were in the Gallery 209 oil paintings, 124 water colours, 162 black and white, 103 engravings and etchings, 22 statuary, and 541 miscellaneous works in metal, etc., the whole being valued at upwards of £47,000. Building and site are valued at upwards of £31,000. Visitors during the year 1909 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 88 oil paintings, 32 water colours, 217 engravings and black and white, 283 statuary, and miscellaneous metal works, etc., of a total value of £15,000.

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, 1905-6 to 1909-10.

State.		1905-6.	1906-7.	1907-8.	1908-9. 190	
		£	£	£	£	£
New South Wales	(Total£	934,634	941,654	1,055,197	1,104,077	1,149,422
New South Wates	Per head	12/5	12/2	13/4	13/9	13/11
Wistonia	(Total £	810,850	842,071	872,655	925,368	953,499
Victoria	Per head	13/3	13/7	13/10	14/5	14/7
Queensland	Total £	338,426	366.635	399,291	423,080	510,388
	Per head	12/8	13/7	14/6	14/11	17/4
G 13 4 4 31	(Total £	199,628	193,346	210,712	238,376	231,584
South Australia	Per head	10/6	10/4	10/7	11/7	11/1
	Total £	230,573	217,036	219,176	221.377	222,861
Western Australia	Per head	17/9	16/6	16/6	16/4	16/-
_ ′ .	(Total £	68,163	68,777	73,242	81,182	87,603
Tasmania	Per head		7/8	8/1	8/10	9/7
			<u> </u>			
Commonwealth	(Total £ (Per head		2,629,519 12/8	2,830,273 13/4	2,993,460 13/10	3,155,357 14/3

The comparatively heavy expenditure in Queensland for 1909-10 is due to the inclusion of an expenditure of £70,000 in connection with the establishment of the University.