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## SECTION XXII.

## PUBLIC INSTRUCTION.

## § 1. Evolution of Educational Systems in Australia.

1. Educational 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 beginning 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. (See also 2 hereunder.)

(ii) *Educational Systems of 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. Later details are given hereunder.

2. Recent Development in State Educational Systems.—(i) *New South Wales.* The year 1913 was an important one in New South Wales educational history, in that it was the first complete year of active operation of the principles laid down in the University Amendment Act and the Bursary Endowment Act of 1912. More extended reference to these Acts will be found later on. It was also remarkable for the reorganisation of technical education on a Trades School basis and of the Superior Schools on a vocational basis. Reference may also be made to the development of the Evening Continuation Schools established in 1911, and to the wide extension of the scheme of school medical inspection. As pointed out in a preceding Official Year Book (see No. VII., page 765), the Education Department instituted a scheme of examinations in 1911 for what were termed respectively the "qualifying," "intermediate," and "leaving" certificate. The first "qualifying" examination was held in March, 1911, the first "intermediate" in November, 1912, and the first "leaving" in November, 1913. The successful students who were awarded exhibitions at the leaving certificate examination took up University studies in the first term of 1914, thus marking the definite linking up of the State School system with the University. Amongst noteworthy features in the year 1914 were the remarkable increase in school population, the establishment of Trade Schools, the expansion of secondary education, and the extension of the scheme of school medical inspection. The travelling hospital and the travelling ophthalmic and dental clinics are rendering splendid service in the remote and sparsely settled districts. During the last few years increasing attention has been devoted to the development of infant schools on the lines of awakening a larger sense of responsibility amongst the young children by giving them a greater measure of freedom. It is recognised by modern educationists that freedom coupled with responsibility lies at the root of all true education.

During 1917 the provisions of the Public Instruction (Amendment) Act of 1916 were found to have exercised a marked influence on school attendance, and in many schools the average now exceeds 90 per cent. of the effective enrolment.

Arrangements were made during the year for the teaching of Japanese in selected High Schools.

It has been found that a large proportion of children leave school at the age of fourteen years or thereabouts. As in other countries, it is realised in New South Wales that this removal from educational guidance at the very time when such formative influences are so necessary is against the best interests of the children and the State, and it is intended to submit proposals to Parliament for continuous training to an extent which will give more adequate preparation for the responsibilities of adult life.

(ii) *Victoria.* Under the Amending Education Act of 1910 it is provided that every child must attend school for the full period of eight years between 6 and 14, unless he be given a certificate of education at 13. The schools are open on an average 225 days in each year, and require attendance on all these days, unless reasonable excuse is forthcoming. Provision is made for the mentally deficient. The primary curriculum divides the school life into eight grades, so that a child entering at six years of age will have completed the full course by the time he reaches his fourteenth year. After completion of the elementary school course, the pupil may go on to the Evening Continuation Schools, Higher Elementary Schools, District High Schools, or the Trade Schools. Special schools for feeble-minded children have been established in the metropolis, and an "open air" school for delicate children is in operation at Blackburn. There is also a special school for epileptics at Clayton. Highly encouraging results have been obtained at all these institutions. A Council of Public Education has been appointed to advise on educational matters generally, and particularly in regard to co-ordination. Examinations are held throughout the State for the certificate of merit and the qualifying certificate. The former is granted to pupils who, under prescribed conditions, reach a satisfactory standard in subjects prescribed for Grade VIII., while the latter is awarded to pupils who reach a satisfactory standard in Grade VI. Possession of this certificate enables the holder to enter upon the work of the Higher Elementary or the District High School. Acting on the advice of the Council of Education, the Melbourne University has established a Schools Board. The function of this body is to consider all questions relating to school studies and the inspection and examination of schools. In addition to University representation, there are also on the Board representatives of the Department of Education, the registered Secondary Schools, and the business interests of the community. Being clothed with such wide powers, this Board must of necessity be the chief guiding factor in the development of education in Victoria. During the year 1915 a considerable amount of attention was devoted to the organisation of the elementary schools, especially in connection with the question of retardation, and in regard to the teaching of infants. It is hoped that the greater flexibility in organisation and system of promotions, coupled with special methods of dealing with backward pupils, will tend to considerably lower the retardation percentage. The institution of the uniform school year, the greater powers conferred on the head teachers in regard to the promotion of scholars, the making of the inspector an advisory rather than an examining officer, and the better provision for the practical training of the junior teachers have all been fraught with excellent results. During recent years methods of training teachers have been considerably improved. Formerly there was only one course leading to the trained teacher's certificate. At present four courses are provided—primary, secondary, infant, and short course for teachers of rural schools.

(iii) *Queensland.* The Amending Act of 1910 introduced several new features into the educational system of Queensland, chief amongst them being—(a) employment of proceeds of sales of land and other school property for school purposes, instead of paying them into Consolidated Revenue; (b) abolition of local contributions; (c) provision of scheme of school certificates to assist in co-ordination of various branches of the system; (d) establishment of compulsory continuation classes; (e) compulsory medical and dental examination; (f) raising the compulsory age to 14 years instead of 12 years; (g) provision for compulsory attendance on every day on which the school is open. The last-mentioned provision has already produced good results in regard to improved attendance. The organisation of the general scheme of education is being systematically developed. State High Schools were inaugurated in February, 1912, and a more liberal scheme of

scholarships to secondary schools came into force in 1913, while further amendments were made in 1914 and 1915. A Teachers' Training College has been established, and greater attention is being given to the development of technical education. Methods of instruction have been brought into consonance with the latest developments under the new syllabus adopted in 1914. During this year also the medical and dental inspection of State School children were considerably extended.

(iv) *South Australia.* One of the chief events in educational development in South Australia in 1911 was the provision of Evening Continuation Schools, intended to help those who cannot afford to attend the Higher Day Schools. The State has also come into line with the other States in the matter of medical supervision of school children, and a medical officer and two trained nurses have been appointed. The changes introduced at the Teachers' Training College have proved very satisfactory, and the academic teaching at the University is now supplemented by a systematic pedagogic instruction for all classes of teachers. A course of six months' instruction and training for teachers of small schools was introduced in 1913, and has proved of great value. In 1913 the principle was adopted of simultaneous examination of the schools, and granting to teachers the authority to make the promotions of their scholars. An Act to consolidate and amend the law relating to Public Instruction was assented to on the 23rd December, 1915. Under the Amending Act of 1916 all Lutheran Schools are to be taken over by the State. A Superintendent of Technical Education was appointed in 1916.

(v) *Western Australia.* During 1912 the curriculum of the Primary Schools was remodelled in order to bring it into line with the most up-to-date principles. The work was lightened in directions where experience shewed there was overloading, and efforts were particularly directed toward the removal of the abstract and to the development of the imaginative and constructive throughout all grades. Greater freedom was given for experiment by the teacher, and it is recognised that considerable improvement has resulted. Montessori principles are being increasingly adopted in the teaching of the youngest children. Constructive work is receiving greater attention in all departments, and encouragement is given to original or research work of an elementary character. Four special courses—commercial, industrial, domestic, and professional—have been established at the central schools. These schools are practically day continuation schools designed to carry on the education of boys and girls beyond the primary stage. Continued efforts are being made in the direction of bringing about a closer correlation between primary and secondary education. The Modern School at Perth was opened in 1911. In June, 1914, a Goldfields High School was opened at Kalgoorlie, and it is proposed to establish additional schools at the larger country centres, and in the meantime to grant scholarships at the existing High Schools to country children. Continuation classes were held at various centres in 1916, with an enrolment of 2,600. Certificates granted to successful students entitle the holder to advanced tuition at the Technical College. During 1917 a medical officer for schools was appointed under the Public Health Department.

(vi) *Tasmania.* During the last seven years educational effort in Tasmania has been directed to the development on modern lines of the primary system, the foundation of secondary schools, and the provision of a satisfactory system of training for teachers. Kindergarten, Montessori Schools, and Model Country Schools have been established as adjuncts to the training system, and the courses have been remodelled with a view to providing trained teachers for secondary as well as for primary work. At the High Schools, secondary, commercial, and industrial courses have been established. School hygiene has received especial attention, doctors and nurses have been appointed, and two dental clinics have been established.

(vii) *Northern Territory.* Although the number of children of school age in the Territory is small, nevertheless ample provision has been made by the Commonwealth Government for their education. Five State schools are in operation, viz., at Darwin, Pine Creek, Brock's Creek, and Daly River in the northern portion, and at Alice Springs

in the south. There is a special school for aboriginal and half-caste children at Darwin, also one at Alice Springs. A satisfactory standard is maintained at the schools, but progress is somewhat retarded by irregular attendance. Continuation classes are available at Darwin for cadets in Government employment and for others.

(viii) *Present Position of State Education in Australia.* Throughout Australia primary education is compulsory and free of charge, 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. Provided that the requisite standard is reached, it is, of course, permissible for children to receive home tuition, or to attend so-called private schools. Considerable interest is taken in educational matters by the people of the Commonwealth, and within recent years several of the States 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, especially those of New South Wales, 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 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 now better developed, and although the "pupil teacher" system with its effects have not been wholly eliminated, it appears to be gradually vanishing. (The methods adopted in the various States for the selection and training of teachers are described in some detail in § 2, 10, hereinafter.) 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, music, and drawing have received a general impetus. Greater attention has been given to the scientific classification of children. Moreover, as will be seen from the above, and from § 2, 7, the State Education Departments are increasing their activities in the direction of secondary education. 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 this officer consists in guiding and directing the teaching in accordance with approved methods. [See also § 6, Technical Education.]

(ix) *Co-ordination of Educational Activities.* As pointed out already, the educational system of New South Wales may now be considered as a more or less homogeneous entity, the various stages succeeding one another by logical gradation from kindergarten to university. In the other States development is proceeding on somewhat similar lines, although in varying degree. [See also § 1, para. 2 *supra*.]

(x) *Educational Conference.* In May, 1916, the first Conference of Directors of Education in the States of the Commonwealth was held at Adelaide. Amongst important matters discussed thereat may be mentioned:—(a) *Education Reports (Departmental).* In regard to these a decision was arrived at respecting the general principles which should govern the preparation of future reports in order to ensure uniformity so far as the compilation and presentation of statistics relating to enrolment, attendance, and finance are concerned. (b) *Raising School-age Limit.* In view of the circumstance that educational expenditure has, up till now, been largely wasted owing to school attendance ceasing at the age of 14 in the case of so many children, it was resolved that legislation is desirable providing for continuous education up to the age of 16, and that attendance be made compulsory except where special exemption could be granted on the ground of educational fitness. (c) *Schools for Defectives.* At present New South Wales and Victoria have a school each of this type, but it was agreed that such schools ought to be provided where required. (d) *Other Special Schools.* Each State is making experiments in regard to the provision of new types of schools giving industrial and secondary instruction, and arrangements were made for the exchange of detailed information in regard to their working. (e) *Sex Physiology.* The Conference was opposed to the introduction of special teaching on this subject, and it was affirmed that efforts should

be directed towards excluding all thought and talk about sex matters from the schools. It was agreed, however, that the Departments should prepare a special leaflet setting forth the duties of parents in this direction.

## § 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, through privately managed, nevertheless cater for all classes of the community. Information regarding Technical Education is given in § 6.

2. **Enrolment and Attendance.**—The following table shows the number of State Schools, together with the teachers employed and the enrolment and “average attendance” in each State during the year 1917:—

### STATE SCHOOLS, TEACHERS, AND SCHOLARS, 1917.

(COMMONWEALTH.)

State or Territory.	Schools.	Teachers.*	Scholars Enrolled.	Average Attendance.
New South Wales†	3,221	8,633	282,757	221,940
Victoria	2,286	6,602	225,370	167,588
Queensland	1,507	4,075	108,201	88,259
South Australia	870	2,098	70,959	56,782
Western Australia	639	1,714	47,717	41,034
Tasmania	465	1,048	29,699	24,300
Northern Territory	4	7	277	186
Commonwealth	8,992	24,177	764,980	600,089

\* Exclusive of sewing mistresses. † Including Federal Territory.

Unfortunately, the schemes of enrolment and of the computation of “average attendance” are not identical in each State, so that the comparisons are imperfect.

The enrolment and average attendance at the State Schools in the Commonwealth are given below for the years 1891, 1901, 1911, and for each year of the period 1913 to 1917:—

### ENROLMENT AND ATTENDANCE AT STATE SCHOOLS, 1891 TO 1917.

(COMMONWEALTH.)

Year.	Total Population*	Enrolment.	Average Attendance.	Year.	Total Population*	Enrolment.	Average Attendance.
1891	3,241	561,153	350,773	1914	4,941	713,232	544,230
1901	3,825	638,478	450,246	1915	4,932	732,464	557,962
1911	4,569	638,850	463,799	1916	4,875	751,126	569,306
1913	4,872	685,406	515,948	1917	4,935	764,980	600,089

\* In thousands.

3. **Schools in the Federal Capital Area.**—During the year 1917 thirteen State Schools were in operation in the Federal Territory (Yass-Canberra). The pupils enrolled numbered 407 and the average attendance 279. Cost of upkeep in 1917 amounted to £2,831. By arrangement with the Federal Government these schools are conducted by the New South Wales Education Department on the same lines as the ordinary State Schools, the Department being recouped for expenditure.

4. **Centralisation of Schools.**—The question of centralisation of schools adopted so successfully in America has received 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 12 schools. During 1917 over £13,000 was expended on boarding allowances and in the conveyance of pupils to Central 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. (iii) In still more sparsely-peopled districts, an itinerant teacher goes from house to house within a certain radius. Thus, in Queensland during 1917 the 14 itinerant teachers covered 439,200 square miles of country and travelled 54,646 miles to visit 1,479 children. In this State also the Education Department has established what are known as Saturday Schools, in which small groups of children in outlying districts are visited by the nearest teacher on Saturdays and receive the benefit of several hours' instruction. These schools, of which there are now ten, have been warmly welcomed in the districts in which they are established, inasmuch as under this system the children "outback" receive a greater amount of instruction than is possible under the system of itinerant teachers. During 1917, the Education Department in Western Australia disbursed £9,121 in "driving grants," *i.e.*, sums of money granted to parents whose homes are over three miles from the nearest schools, and who arrange to have their children driven in. In New South Wales, Victoria, Western Australia and Tasmania 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. During 1917 subsidy was paid to 646 schools in New South Wales. (iv) An experiment on the part of New South Wales, the result of which was awaited with some interest, was the establishment in 1908 of a "Travelling" School. A van was provided in which the teacher travelled, carrying 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. So far very satisfactory results have been attained. Two additional schools of this nature were established in 1914. (v) There are also railway camp schools in operation on the sites of extensive railway works. Regulations were framed in Tasmania during 1912, providing for the subsidising of private teachers at a rate not exceeding £5 per pupil in districts too remote or sparsely settled to warrant the establishment of an ordinary Provisional School. The schools of this nature established in 1917 numbered 61, with an enrolment of 752 scholars. During the year the department also paid for the conveyance of 251 children to schools by boat, vehicle, or train. New South Wales and Victoria provide for education, by correspondence, of children in isolated districts.

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 the 42 Evening Continuation Schools had an average attendance in 1917 of 2,000. In Victoria there was only one night school in operation for elementary work during the year. It is stated that future developments in evening instruction will be in the direction

of continuation classes. Western Australia has evening continuation classes in the chief centres; the attendance in 1917 numbered 3,196. Evening Continuation Schools have been established under regulation in South Australia, and are intended principally to help the working boy to improve his general education and to add to the store of knowledge most useful in his present work.

7. **Higher State Schools.**—(i) In *New South Wales*, public schools which provided advanced courses of instruction for two years for pupils who have completed the primary course were classed as *Superior Schools*. These were reorganised in 1913 as Day Continuation Schools, and divided into Superior Commercial Schools, Superior Junior Technical Schools, and Superior Domestic Schools for Girls. During 1917 there were 93 schools of this type in operation, of which 26 were in the Commercial group, 24 in the Junior Technical, and 43 in the Domestic group, with an average attendance of 3,989 in the sixth and seventh classes. It is believed, however, that greater efficiency could be produced by reducing the number of these schools and establishing Central "Superior Public Schools" instead. Provision has also been made for the more advanced education of children in country centres by the establishment of 18 District Schools. These schools are specially staffed, and undertake the work of preparing students for admission to the training colleges. There are also 21 *High Schools* in the State. These had an enrolment in 1917 of 6,088, with an average attendance of 5,011. To meet the wishes of representatives of the registered Secondary Schools, the syllabus of the High Schools was amended in 1913, and now offers such a wide range of choice in the selection of subjects that there is no possibility of producing a merely stereotyped uniformity of study. Three "Intermediate" High Schools have been established to meet the growing demand for High School education in the metropolis, and others will be provided during the next few years in the city and in country centres. The average attendance at these schools in 1917 was 545. In accordance with Departmental regulations liberal provision is made for scholarships and bursaries to the higher State Schools. Under the provisions of the University Amendment Act of 1912, 200 exhibitions were awarded in 1917 to successful students at the leaving certificate examinations, and 114 of these were given to pupils attending the State Schools.

The Sydney Grammar School (not a "State" School in the ordinary acceptation of the term), which receives a State endowment of £1,500 a year, had, in 1917, a quarterly enrolment of 624 pupils, and an average attendance of 587.

During 1917 the State School of Aviation at Richmond was transferred to the control of the Education Department. The school served a military purpose during the war, but it is hoped that it will henceforward prove of great commercial value to the State.

(ii) In *Victoria*, action was taken in January, 1912, to give effect to the provisions of the Education Act of 1910, with regard to the decentralisation of the system of secondary education. Twenty Higher Elementary and 28 District High Schools have been established, and, to obviate congestion at the High Schools, Higher Elementary Classes are carried on at ten "Central" Schools. The enrolment at the end of the first term at the Higher Elementary Schools in 1917 was 1,896, of whom 955 were girls, at the District High Schools 5,318, of whom 2,559 were girls, while 582 boys and 588 girls were receiving secondary teaching in the Central Schools. The qualifications for admission to the High Schools and Higher Elementary Schools are that pupils shall be not less than 12 years of age, shall possess the qualifying certificate or its equivalent, and that their parents shall undertake that the children will remain at school for four years. For the first two years there is a common course for all pupils, thereafter replaced by four special courses:—(1) A preparatory professional course for pupils preparing to proceed to the University, to enter the teaching profession, or to gain a sound general education; (2) an agricultural course to be taken in Agricultural High Schools; (3) a commercial course; and (4) a domestic arts course for girls. Parallel with these courses an industrial course has been developed for pupils who intend to enter upon some form of industrial occupation.



Junior Technical Schools have been established apart from the High Schools in Melbourne, Ballarat, Bendigo, and Geelong, and there are schools also at Glenferrie, Collingwood, Sunshine, and Warrnambool.

Scholarships granted by the Department are as follows:—(a) One hundred junior, tenable for four years at a District High School or approved Secondary School, with allowance of £26 per annum for board where required; (b) Forty senior, tenable four to six years, with allowance of £40 towards expense of course at University; (c) Fifty junior technical, giving free tuition for two years at a Junior Technical or other approved school, and, in certain cases, board allowance of £26 per annum; (d) Fifty-five senior technical, giving free tuition for approved courses at Technical schools, with £30 allowance for day students, and £10 for night students; (e) Sixty teaching, similar in other respects to junior; (f) Twenty nominated courses, giving four to six years' free tuition in agriculture, mining, or veterinary science at the University, with allowance in certain cases of £26 per annum.

(iii) Prior to the year 1912, *Queensland* did not possess any distinctly Secondary Schools under State control, but in February of that year High Schools were opened at Warwick, Gympie, Bundaberg, Mount Morgan, Mackay, and Charters Towers. Tuition at these schools is free, but students must pass a qualifying entrance examination. Three courses of study, General, Commercial, and Domestic, are provided. The General Course will lead up to the University, and students will be able to matriculate from the High Schools. In 1917 new High Schools were opened at Gatton and Cairns. In smaller centres where an average of not less than 25 qualified pupils can be obtained, secondary tuition is provided at existing State Schools, and this has been arranged for at Brisbane Central (boys), Brisbane Central (girls and infants), Herberton, Childers, Dalby, Pittsworth, Roma, and Southport. The enrolment at High Schools in 1917 was 1,064, and the daily attendance 847. There are, moreover, 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 five scholarships for State scholars. The enrolment at the Grammar Schools in 1917 was 1,600, and the average attendance 1,466. Since the year 1909 these schools have been regularly examined by the Inspector-General of the Education Department.

Under the amended scheme of scholarships to Secondary Schools which came into force in 1914, all candidates who gained 50 per cent. of marks at the previous December examination were eligible for free scholarships tenable for three years at an approved Secondary School. Provision was made for board allowance of £30 per annum where necessary and of £12 where the holder lived at home. In 1915 the tenure was altered to two years, with the proviso that, should the holder at the end of that period obtain an approved pass at the University Junior Examination, an extension scholarship of two years was granted, and, in addition, an extension at the end of the fourth year where an approved pass at the Senior University Examination was obtained. The extension scheme came into force in 1917, when 93 boys and 45 girls gained extension for a third and fourth year.

As a result of the 1917 examinations, scholarships were awarded to 526 boys and 312 girls.

Prior to the establishment of the Queensland University, three exhibitions per annum to approved Universities were granted. These have been replaced by twenty scholarships to the local University. Each scholarship is tenable for three years, and carries an allowance of £26 per annum if the holder lives at home and attends the University, or £52 per annum board allowance where necessary.

(iv) *South Australia*. Including the Adelaide High School, there were altogether twenty-one High Schools open in South Australia in 1917, with an enrolment of 3,016 students, and a staff of 97 teachers. In addition to giving secondary education, these institutions form a valuable source from which the Department can draw a supply of young teachers. Under existing regulations provision is made for the following scholarships:—(i) Eight public exhibitions open to boys and girls who have been bona

fide residents of South Australia for two years prior to the competitive examination. The exhibitions are tenable for three years at an approved school or college, carry free tuition and books, and an allowance of £22 per annum when the holder lives away from home. (ii) Forty exhibitions, tenable for three years at an approved school or college are open to competition by children under 13 years of age in attendance at State Primary Schools. (iii) Eight senior exhibitions, worth £40 per annum, and four of the value of £20, are tenable at the Adelaide High School or other approved Secondary School, and are open to pupils of any Secondary School. (iv) Twelve junior exhibitions, eight of £40 and four of £20, tenable for two years at any approved Secondary School, are reserved for pupils of Secondary Schools within a radius of 10 miles of the General Post Office, Adelaide. (v) Twelve Government bursaries, of which six are reserved for pupils of the High Schools. These are tenable at the University, and the holder receives £20 per annum and free tuition. (vi) The Government provides £180 per annum to assist students who are unable to attend the University during the day. Each studentship is limited to £10 for science students, and £7 for arts students.

(v) *Western Australia.* In 1917, there were two schools providing a course up to the leaving certificate standard—the Perth Modern School and the Eastern Goldfields High School—and two District High Schools, at Northam and Geraldton, providing a three years' course up to the Junior Certificate standard. In addition, the Central Schools at Perth, Claremont, and Fremantle have professional courses with a curriculum equal to that of the District High Schools. At the beginning of 1918 District High Schools came into operation at Albany and Bunbury. The Perth Modern School and the Eastern Goldfields High School had an enrolment in 1917 of 412 and 201 students respectively. Extension of the opportunity to obtain secondary education in country districts has been greatly appreciated, and the enrolments at the beginning of 1918 in the High School sections ranged from 100 at Geraldton to 143 at Bunbury. The Science Courses in these schools are designed to aid in the practical study of agriculture. Entrants to State secondary schools must have passed an examination identical with that for Secondary School scholarships, and boarding allowance up to £30 per annum is provided where necessary. Continuation classes were inaugurated in 1911, and were attended at 20 centres in 1917 by about 3,200 pupils. The classes are intended to provide some measure of higher education to those who leave school as soon as they reach the compulsory age of 14 years. Admission to these classes is free, but pupils must attend regularly three evenings a week. Evening Schools are held in various parts of the State, but the work carried on is mainly primary. Junior and senior exhibitions were abolished in 1914 and provision made for 10 University exhibitions, each tenable for three years at the University of Western Australia, and valued at £40 per annum for students living at home and £60 in the case of those living away from home. Fifty scholarships tenable for three years at approved Secondary Schools are annually offered for boys and girls attending Government or other efficient schools. Ten carry an allowance of £20 per annum, and the remainder entitle the holders to receive a grant for books and travelling expenses. Boarding allowance up to £30 per annum may also be granted where necessary. Thirty-three bursaries of the value of £5 each tenable for two years were also granted in 1917. Scholarships to enable children from country districts to attend at District High Schools or the Narrogin School of Agriculture were inaugurated in 1917. Only those children who must live away from home are eligible, and the tenure may in some cases be extended to five years.

(vi) *Tasmania.* Up to the year 1912 the Department confined its efforts to the provision of primary education for the school children in Tasmania. In 1911, however, super-primary classes were formed in the larger schools, with an enrolment in 1911 of 200, and in 1912 of 400 pupils. It was recognised, however, that the previously existing scheme of scholarships and exhibitions was inadequate to meet the demands for higher education. High Schools were therefore opened in January, 1913, at Hobart and Launceston, and intermediate High Schools were opened in 1915 at West Devonport and Burnie. These provide for five classes of pupils—(i) Those who desire to become teachers; (ii) University students; (iii) Commercial; (iv) Mechanics; (v) Home duties (girls). The enrolment in 1917 was 923. It is proposed to grant a leaving certificate at the end of a four years' course. The Bursaries Act of 1915 provides for 30 junior and 20 senior bursaries tenable for two years at an approved State School or registered Secondary

School. They are valued at £2 per annum for a State School and £12 at a Secondary School, in addition to satisfactory boarding and travelling allowance where required. Four-fifths of the bursaries are awarded to country children. The Tasmanian Education Department scholarship is open for competition to High School pupils under the age of 19 years. The scholarship is valued at £20 per annum, with an allowance of £40 if the student lives away from home while attending the approved University course.

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 qualifications of a thorough acquaintance with agricultural work as well as school methods. The Education Department makes grants of seeds of various kinds to schools having gardens, and in some instances has installed windmill plants to provide an adequate water supply. 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. Scholarships are available to students of the Hurlstone Agricultural High School as it is now called, and these scholarships entitle the holder to a two years' free course at the Hawkesbury institution, with a grant of £1 10s. per annum for text books. The Department has also organised Rural Camp Schools for the purpose of giving teachers and scholars first hand knowledge of country industries.

The subject of Agricultural Colleges and Experimental Farms is dealt with in the section relating to Agriculture. (See page 383.)

In *Victoria*, what are termed Agricultural High Schools have been established at Ballarat, Colac, Leongatha, Mansfield, Mildura, Sale, Shepparton, Wangaratta, Warragul, and Warrnambool. Pupils must be at least fourteen years of age, and have passed beyond the curriculum of the elementary school, or else be able to afford satisfactory proof that they are qualified to profit by the instruction offered. The schools are practically secondary schools with an agricultural bias, and form a link between the rural school and the agricultural college. They are also used as a preliminary stage in the education of boys and girls who wish to become teachers and eventually graduate in the State Training College and the University. At some of the schools short courses in agriculture have been instituted for farmers' sons who have left school. A local council is appointed for each school, and exercises 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. A fair number of teachers have gained diplomas in agriculture, and will be in a position to give practical instruction at the High Schools. The elementary principles of agriculture are taught in 755 State Schools. A Horticultural Society has been established in connection with State Schools, and there are 1,200 schools in affiliation. The Society has a nursery and distributing centre for plants and seeds at Oakleigh.

In *Queensland* the Government 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. Some excellent experimental work has been carried out at a few of the schools, while gardens have been established wherever circumstances permitted. 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. At Nambour, a Rural School, the first of its type, was opened early in 1917. In addition to the ordinary subjects of the curriculum this school provides for instruction in farming, fruit growing, dairying, etc. In view of the success of this institution the question of the provision of similar schools in other centres is under consideration.

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. Aid is given by personal visits as well as by correspondence. A seed wheat competition amongst school children inaugurated in 1911 proved very successful, and a second, which was commenced in 1916, will conclude in 1920. Over 600 experiments were arranged and conducted by students at the Nature Study Laboratory in 1917.

In *Western Australia* an advisory teacher of nature study visits the schools and gives advice in regard to proper methods in horticulture and experimental agricultural work. The number and usefulness of the gardens and experimental plots attached to State Schools shew marked improvement each year. Early in 1914 a school was opened on the Narrogin State Farm. The students are taken directly from the primary schools, and the course of instruction lasts for two years. On its completion students are qualified to enter on the diploma course at the University.

In *Tasmania* the organising teacher of nature study visits and advises the teachers at the State Schools, and also gives addresses and model lessons at the schools of instruction.

9. Teachers in State Schools.—The distribution of the teaching staff in the State Schools during the year 1917, including teachers of needlework, was as follows:—

#### TEACHING STAFF IN STATE SCHOOLS, 1917.

(COMMONWEALTH.)

State.	Principal Teachers.		Assistants.		Pupil or Junior Teachers.		Sewing Mis-tresses.	Total.		
	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Total.
New South Wales	2,400	1,319	1,284	3,554	14	62	126	3,698	5,061	8,759
Victoria ..	1,739	1,071	408	1,549	319	1,516	430	2,466	4,566	7,032
Queensland ..	848	746	406	1,088	402	585	..	1,656	2,419	4,075
South Australia ..	408	483	106	670	113	318	116	627	1,587	2,214
Western Australia	345	348	112	648	56	205	58	513	1,259	1,772
Tasmania	150	326	82	192	44	254	2	276	774	1,050
Northern Territory	2	2	..	2	..	1	..	2	5	7
Commonwealth ..	5,892	4,295	2,398	7,703	948	2,941	732	9,238	15,671	24,909

It will be observed that there is a fairly large number of junior teachers, or pupil teachers, as they are called in some 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.—The development of the training systems of the various States has been alluded to at some length in earlier issues of the Year-Book. The present position is as follows:—

(i) *New South Wales*. During 1917, the total number of students in the Blackfriars Training College was 812, women students numbering about 80 per cent. A branch institution was opened early in 1911 at Hereford House for the training of candidates for the position of teacher or assistant at small country schools, and this was attended in 1917 by 355 students. Several of the larger metropolitan schools are used as practice schools for giving training college students opportunity to acquire practical skill in teaching. At the college, a complete set of Montessori apparatus has been prepared for demonstration work on the Montessori principles, and one of the College staff was a

few years ago sent to Italy in order to gain first-hand knowledge of the possibilities of the scheme. Opportunities are also afforded to other members of the teaching staff to visit foreign countries on study leave. The Principal of the Training College is also Professor of Education at the Sydney University. A new Teachers' College within the University grounds is now in course of erection. Up to the year 1913 the limits of accommodation at the Teachers' College were responsible for the employment of a number of untrained junior assistants, but it is now provided that no teacher enters the Service without at least six months' professional training. Schools of instruction for teachers are held each year, the subjects chosen being military drill, swimming, physical training, first-aid work, manual training work, etc., and lectures are given to teachers in rural districts by members of the Teachers' College staff.

(ii) *Victoria.* During recent years the educational and professional attainments of the general body of teachers in Victoria have steadily improved. Prior to the establishment of the High Schools, the pupil or junior teachers were recruited from the ranks of those who had obtained the Merit Certificate in the eighth grade of the elementary schools, and the acquirement of the necessary literary qualifications for promotion was greatly hindered by the circumstance that they were engaged in teaching for the greater portion of the day. Under present conditions, candidates spend three or four years in a High School exclusively in study, and consequently enter on their professional duties with a better mental and physical equipment. On receiving promotion in rural schools as sixth grade teachers, they may join the correspondence classes of the Melbourne High School and receive tuition for the higher examinations. At present about 600 rural teachers are on the correspondence class rolls, while evening and Saturday classes for junior teachers are also held at the school. A number of High School pupils after serving as junior teachers for a year are awarded studentships at the Training College, and competition has been so keen that it has been found possible to exact the standard of the Senior Public Examination for these studentships. 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. During the year 1917, 379 teachers, some of whom were extra-departmental, were brought into contact with the college work. A Training College Hostel has been established, and a Correspondence class formed for country teachers desirous of qualifying for the Infant Teacher's Certificate. The students at the Hostel receive training in domestic economy. Three city and six country practising schools are attached to the Training College, and four infant rooms with attached kindergartens have been specially equipped for the training of infant teachers. The University High School gives secondary teaching practice to both departmental and private students. A remodelled system of training came into force in 1914, providing, amongst other things, for the alteration of the name "Training College" to "Teachers' College," and for the classification of students into three groups, i.e., those training for secondary teachers' certificate, for sub-primary teachers, and for primary teachers.

The Teachers College conducts a Correspondence class for women teachers in the country studying for the Infant Teacher's Certificate. In 1917 the students numbered 160.

(iii) *Queensland.* In connection with the Teachers' Training College opened in Brisbane in 1914, the following scheme has been evolved:—Twenty-five special Teacher scholarships to the University, each with a currency of two years, are to be awarded annually. Living allowances at the rate of £52 per annum and £26 per annum respectively are provided, the former being paid to students living away from home. The University is to provide an Education group of subjects, including Logic, Psychology, and Education. Ten of the scholarships may be carried on for a third year, and five for a fourth year. Practical training is entrusted to a Training Master appointed by the Department. Those who attend the two years' course will be appointed to the Primary Schools, and the graduates from the three and four years' course will be available for High Schools and Secondary Schools. Short courses of training have been instituted for teachers to take charge of small schools, and arrangements have been made to allow an approved number of teachers already in charge of such small schools to obtain the benefit of the training. About 60 short course students are trained each year. In the meantime, young people of both sexes are admitted to the service as pupil teachers at

the age of fourteen years, and receive training from the principals of the schools to which they are appointed. The schools for infants at Kangaroo Point and Rockhampton have been specially staffed and equipped for training Kindergarten teachers, and Kindergarten methods have been introduced into most of the larger schools. Teachers of small schools are also greatly helped by the inspectors' practical and theoretical instruction in the various districts, while the Central Technical College gives correspondence lessons to small-school teachers desirous of passing the Class III. examination. Schools of instruction for the untrained teachers of small schools are conducted by the inspectors in their respective districts.

(iv) *South Australia.* During the year 1910 the system of training in force in South Australia was remodelled and improved. Prior to that year students had devoted themselves chiefly to academic studies, but in 1910 provision was made for increased attention to the theory and practice of teaching. District courses of training were established to prepare teachers for work in primary and infant schools, and an advanced course was outlined for those who will become High School teachers. Each of these courses extends over a year. Students in the primary course who shew special ability may be granted a second year's training. The special course for Secondary Schools will give students an opportunity of obtaining the Diploma of Education. Provision has also been made for a six months' course of training for teachers of provisional schools. There were 72 students in the Training College in 1917. Most of the students have, in the first instance, had a period of one year's practical mentorship in a State school under the guidance of a head master. This is followed by three years' general education in a High School, and a further year of junior teachership in a primary school under the supervision of a head master, prior to entrance to the Training College. At the Adelaide High School there were 238 students training for teachers at the beginning of 1917, and 161 new candidates were admitted, 8 for one year, and 39 for two years. In December, 1917, 135 students left the school to commence teaching. There were also 260 candidates for the junior teachers' entrance examination, of whom 184 passed. Altogether over 1,000 students received instruction in 1917 at this institution, which claims to be the largest secondary school in Australia. Practice in teaching is gained by the student teachers at the Observation School, which also provides training for teachers qualifying for appointment to provisional schools. A director was appointed in 1917 to give instruction in Montessori methods at the school. A considerable amount of help is given to the teachers of small schools at the periodical "Summer" Schools and "refresher" courses.

(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 in 1917 was 142. Two classes of training are provided for—the full course, lasting two years, and a special course of six months. The latter is intended for teachers of small schools in country districts, and the trainees are drawn partly from those already acting as teachers in these schools and partly from outside applicants who pass the necessary qualifying examination. Special practising schools have been established for the proper training in teaching and managing the smaller country schools. Three classes of students are admitted to the full course—(i) from State or private secondary schools; (ii) monitors from departmental schools; (iii) ordinary teachers from the departmental schools. The standard of education required on entering is the school-leaving or matriculation certificate, but a special examination is held for candidates possessing neither. The course is both academic and practical, the former being co-ordinated with the University. As a help in the practical work, there is an adjunct school attached to the college, and several practising schools, two of which are for infants only. An advisory teacher visits the small country schools to give practical help and advice. At the Claremont Infants' School a room has been set apart for work on Montessori lines. During 1917, in addition to short courses at the Training College, schools of instruction for teachers of small schools were held at Toodyay, Woodanilling, and Narrogin, and monitors' classes were held at Perth, Fremantle, and Kalgoorlie.

(vi) *Tasmania.* During 1917 the schemes for the training of teachers were recast and grouped in four divisions:—(1) A short course to supply the professional training required for the less important positions in the primary schools and for teachers of

the smaller provisional and Sixth Class schools. The course lasts six months. (2) Training of infant teachers. (3) Training for positions in the larger primary schools. (4) Training of high school teachers. Practical training for the various classes is given in well-equipped practising schools and in model small schools. The inspectors also hold schools of instruction for teachers of small schools. The enrolment at the Training College in 1917 numbered 29.

11. **School Savings Banks.**—Returns shew that these institutions are in existence in three States. In New South Wales, there were 808 banks at the end of 1917, the deposits amounting to £49,047, and withdrawals to £46,186. Since the establishment of the banks in 1887, deposits totalled £611,599, and withdrawals £595,563. Of the latter sum £133,224 was placed to the children's accounts in Government Savings Banks. In South Australia, 514 schools had 26,085 depositors, with £24,028 to their credit; and in Western Australia, there were 441 school banks, with 25,953 depositors and £37,672 to their credit.

12. **Expenditure on State Schools.**—The net expenditure on State education during 1901 and for the five years ended 1917 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 AND 1913 TO 1917.

(COMMONWEALTH.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	C'wealth.
	£	£	£	£	£	£	£	£
1901 ..	623,734	656,907	256,245	152,006	89,694	37,710	..	1,816,296
1913 ..	1,318,326	975,977	432,751	243,094	258,171	91,513	1,942	3,321,774
1914 ..	1,366,955	995,120	458,466	254,485	290,929	105,147	1,830	3,472,932
1915 ..	1,428,873	1,033,292	462,842	260,279	299,505	110,981	1,246	3,597,018
1916 ..	1,534,186	1,032,708	484,500	268,399	305,130	111,140	1,956	3,738,019
1917 ..	1,662,658	1,033,876	562,418	295,261	319,954	115,547	1,594	3,991,308

The expenditure per head of average attendance for each of the years given above will be found in the succeeding table.

#### COST PER HEAD OF AVERAGE ATTENDANCE, STATE SCHOOLS, 1901 AND 1913 TO 1917.

(COMMONWEALTH.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	C'wealth.
	£ s. d.	£ 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
1913	7 8 1	6 4 2	5 8 3	5 12 3	7 2 5	4 6 5	28 1 1	6 8 9
1914	7 3 9	6 1 11	5 10 1	5 9 11	7 11 1	4 13 2	18 9 8	6 7 7
1915	7 7 1	6 4 0	5 8 9	5 7 4	7 10 0	4 15 4	9 13 2	6 8 11
1916	7 13 0	6 3 1	5 14 0	5 2 4	7 12 8	4 15 5	11 18 6	6 11 4
1917	7 9 10	6 3 5	6 7 5	5 4 0	7 15 11	4 15 1	8 11 5	6 13 0

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

### EXPENDITURE ON STATE SCHOOL BUILDINGS, 1901 AND 1913 TO 1917.

(COMMONWEALTH.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	C'wealth.
	£	£	£	£	£	£	£	£
1901 ..	57,663	36,040	33,421	13,656	49,073	7,762	..	197,615
1913 ..	347,183	158,028	77,715	59,385	61,464	16,456	791	721,022
1914 ..	302,566	198,377	107,113	56,840	36,513	20,233	..	721,642
1915 ..	234,281	315,869	83,159	32,163	51,252	20,640	214	737,578
1916 ..	303,001	220,042	96,397	33,472	24,863	28,793	..	706,568
1917 ..	208,733	116,010	78,080	46,948	21,034	21,667	253	492,725

The net total cost and the net cost per scholar in average attendance during the year 1917 were as follows:—

### NET TOTAL COST, STATE SCHOOL EDUCATION, 1917.

(COMMONWEALTH.)

Item.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	C'wealth.
	£	£	£	£	£	£	£	£
Net cost of education, including buildings ..	1,871,391	1,149,886	640,498	342,209	340,988	137,214	1,847	4,484,033
Per scholar in average attendance	£8/8/7	£6/17/3	£7/5/2	£6/0/6	£8/6/2	£5/12/11	£9/18/7	£7/9/5

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

## § 3. Private Schools.\*

1. **School Teachers, etc., in 1917.**—The following table shows the number of Private Schools, together with the teachers engaged therein, and the enrolment and average attendance in 1917:—

### PRIVATE SCHOOLS, 1917.

(COMMONWEALTH.)

State.	Schools.	Teachers.	Enrolment.	Average Attendance.
New South Wales .. .. .	659	3,707	68,516	55,425
Victoria .. .. .	495	1,970	56,193	47,000
Queensland .. .. .	156	841	20,331	16,880
South Australia .. .. .	169	703	14,015	10,081
Western Australia .. .. .	123	497	11,484	10,097
Tasmania .. .. .	82	308	6,509	4,880
Northern Territory .. .. .	1	2	78	46
Commonwealth .. .. .	1,685	8,028	177,126	144,409

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



Compared with the previous year, the number of private schools in New South Wales in 1917 shews a falling-off amounting to about 6 per cent., the decrease being due to the circumstance that a number of undenominational schools failed to satisfy the requirements of the Public Instruction Amendment Act of 1916, and were not granted registration.

The totals for New South Wales are exclusive of returns from the Sydney Grammar School, which receives a yearly State subsidy of £1,500, and which, in 1917, had an enrolment of 624, and an average attendance of 587.

The figures for Queensland include the returns from Grammar Schools, of which there are ten—six for boys and four for girls, with an enrolment of about 1,000 boys and 600 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, in some instances, an additional £250 to provide district scholarships. The total Government aid received in 1917 was £9,563. The Grammar Schools are inspected annually by the departmental Inspector-General.

2. **Growth of Private Schools.**—The enrolment and average attendance at Private Schools during 1891, 1901, and in each year of the period 1910 to 1917 are as follows :—

#### ENROLMENT AND ATTENDANCE AT PRIVATE SCHOOLS, 1891 TO 1917.

(COMMONWEALTH.)

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891 .. ..	124,485	99,588	1913 .. ..	161,204	132,679
1901 .. ..	148,659	120,742	1914 .. ..	162,813	135,141
1910 .. ..	158,694	129,872	1915 .. ..	172,957	144,804
1911 .. ..	160,794	132,588	1916 .. ..	177,650	146,380
1912 .. ..	164,085	133,940	1917 .. ..	177,126	144,409

The small rate of increase in private school enrolment and attendance is due in a large measure to the development of the State educational systems, especially as regards the provision of secondary education.

3. **Registration of Private Schools.**—Until recent years the various State Governments had comparatively little control over privately conducted schools. With the advance of modern educational thought the position is improving, but still leaves much to be desired. It is evident that without a thorough system of registration there will always be a difficulty in regard to enforcing the compulsory clauses of the various Education Acts. Moreover, advanced educational thought demands complete supervision, not only of curricula, but of all matters pertaining to school hygiene.

In New South Wales, under the provisions of the Bursary Endowment Act of 1912, 51 non-State Schools were inspected by the Departmental Inspector of Secondary Education for registration or renewal thereof. Under the compulsory clauses of the amending Public Instruction Act of 1916 children between the ages of 7 and 14 years must attend schools certified as efficient by the Minister. Provisional registration is granted to applicants pending inspection by Government officers. School proprietors must conform to prescribed conditions in regard to the hygiene, etc., of their buildings.

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, and the Education Act of 1910, established a registration scheme under a special committee. At present, the committee consists of nine members of the Council of Education. Section 60 of the Act of 1910 also empowers the Minister of Education to authorise the inspection of any school (other than a State School) in order to ascertain whether the instruction given is satisfactory. The inspector of registered schools has on several occasions pointed out that there is a fair number of institutions which are very unsatisfactory, both as regards buildings and quality of instruction given therein.

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, 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, 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, were 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. German Schools in Australia.**—The accompanying particulars in regard to German Schools in Australia have been extracted from information supplied by the State Education Departments.

*New South Wales.* In this State there are three private schools conducted by German teachers, and attended entirely by children of German descent. The schools are situated at Jindera, near Albury (26 pupils); Trungley Hall, near Temora (31 pupils); and Gidginburg, near Temora (17 pupils). The schools are inspected by the Departmental officers, and school work is conducted in English. The use of German as the language of instruction is not permitted in any school. Jindera, Trungley Hall, and Gidginburg have been gazetted "certified" schools under the provisions of the Public Instruction Amendment Act of 1916.

The scholars attending the following State schools consisted largely of children whose parents were known to be of German descent:—Alma Park, Burrumbuttock East, Gerogery Railway Station and Gerogery West, Glenellen, Hovell, Major's Plains, Jindera, Lavington, Walkyrie, Walla Walla. Many of the scholars at these schools could speak German before they attended school.

*Victoria.* There are ten registered private Lutheran schools in Victoria, with an attendance of 326 pupils. In connection with these schools it has been laid down by the Government that the German language is not to be employed in teaching, and books, charts, etc., in German are prohibited. Religious instruction in German is not permitted, and the syllabus of instruction must be on lines prescribed by the Education Department, and be such as will promote good citizenship and loyalty to the British Empire. There are no State German schools.

*Queensland.* There are now no German day schools in operation. In districts where German families form a considerable proportion of the population the children attend the State schools, and, in common with other children, are subject to the conditions imposed by the compulsory clauses of the State Education Act now in force.

*South Australia.* In the year 1916 there were 52 Lutheran schools in this State, practically all under the control of the Lutheran Church. In many of these schools the teaching was carried on in the German language, and English was hardly spoken at all. Religion as taught by the Lutheran Church formed an important part of the instruction.

The Education Act of 1915 provided that teaching should be through the medium of the English language for at least four hours a day. The Education Amendment Act of 1916, however, provided that the Government should take over and carry on all Lutheran schools not earlier than 30th June, 1917, and not later than 31st December, 1917, and that no language but English should be spoken in the schools. The Act was put into force on the 1st July, 1917. With the exception of the Point Pass and Concordia Secondary Schools there are now no Lutheran schools in South Australia. Forty-nine Lutheran schools were closed on the 30th June, and 45 of these re-opened, 25 being absorbed into neighbouring public schools, while 20 were carried on in their own buildings with an English teacher. Four schools were not opened, owing to the determination of the parents to defeat the Department by refusing to assist in finding accommodation for the teacher.

*Western Australia and Tasmania.* There are no German schools in either of these States.

#### § 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 cases of Victoria and Western Australia, the details for which were furnished by the Education Departments.

#### FREE KINDERGARTENS IN THE COMMONWEALTH, 1917.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
New South Wales (Sydney)	10	551	17	50*	12
Victoria (Melbourne) ..	26	1,470	54	14	283
(Ballarat) ..	1	40	2	..	14
Queensland (Brisbane) ..	6	168	8	23	1
South Australia (Adelaide)	4	200	8	17	..
Western Australia (Perth)	2	85	3	18	..
Tasmania (Hobart) ..	2	90	3	5	4
(Launceston) ...	1	44	1	5	..
Total ..	52	2,648	96	132	314

\* Exclusive of 34 teachers attending courses and 18 students attending single classes.

It must, of course, be distinctly understood that the information given above refers to institutions under private kindergarten unions or associations, and is exclusive of institutions controlled by the Education Departments of the various States.

## § 5. Universities.

1. **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 I. and 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 24 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. The passing of the University (Amendment) Act of 1912 marks an important epoch in the development of the educational system of New South Wales. The Act aims at placing the University in a more effective position as the culminating point in a thoroughly co-ordinated system of State education, and it is claimed that the passing of this measure makes the educational system—from the Primary Schools through the Secondary Schools to the Technical Colleges or to the University—form a progressive and continuous whole. Under the new Act the Constitution of the Senate was radically changed, and this body now consists of—four Fellows appointed by the Governor, one elected by members of the Legislative Council, one elected by members of the Legislative Assembly, five representatives of the University teaching staff, ten elected by graduates of the University, and three elected by the aforesaid Fellows. The professorial representatives hold office for two years, and the other Fellows for five years. In addition it was provided that in view of their distinguished services, the late Chancellor, Sir Normand MacLaurin, and the Vice-Chancellor, Judge Backhouse, should each during his life be a Fellow in addition to the ten Fellows elected by the graduates. The second part of the Act contains a feature of outstanding importance, in that it provides for the allotment of exhibitions in the proportion of 1 for every 500 of the population of New South Wales between the ages of 17 and 20, or in such other ratio as may be determined by Parliament. These exhibitions, which carry exemption from all fees, are not restricted to any particular faculty in the University, and are principally allotted in order of merit as shewn by examinations for leaving certificates at the State Schools. Pupils of registered Secondary Private Schools are also eligible for leaving certificates on the same conditions as those of the State Schools. To gain a leaving certificate a candidate must have satisfactorily completed an approved four years' course of study. Five per cent. of the total number of exhibitions allotted in any year are available for successful candidates at the written examination, even though they be ineligible for a leaving certificate. At the inception of the University there were only three professorships. The present staff consists of 23 professors, including the Director of Military Science, seven assistant professors, and 135 lecturers and demonstrators. There are, in addition, various honorary lecturers and demonstrators, as well as 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 17 professors, 73 lecturers and demonstrators, as well as various assistants. The Conservatorium of Music has a staff numbering 38.

(iii) *University of Adelaide.* This University was established by Act of Parliament in 1874. Its origin and progress were 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 over £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 eleven professors, forty-five lecturers with the necessary complement of demonstrators, etc., while the staff at the Conservatorium, not included in the foregoing figures, numbers sixteen.

(iv) *University of Tasmania.* The Act to establish the University of Tasmania (Hobart) was assented to on the 5th of December, 1889. At the present time the institution, which is small but efficient, possesses a staff of six professors, eight independent lecturers, and four student assistants. Under Statute dated 13th April, 1905, the Zeehan School of Mines and Metallurgy was affiliated to the University, while the School of Mines and Industries at Mount Lyell was affiliated on the 4th November, 1915. Tutorial classes have been arranged at Hobart and Launceston, and Extension Committees have been formed in various country centres.

(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 14th March, 1911, when 60 students were matriculated. Provision has been made for a Correspondence Study department in connection with the institution, and at the request of the Brisbane branch of the Workers' Educational Association weekly lectures are given in History and Economics. At the present time there are four professors, *i.e.*, one each of classics, chemistry, engineering, and mathematics and physics, with twelve independent lecturers, seven assistant lecturers, seven demonstrators and five honorary lecturers. The Correspondence department is under the control of a director and assistant. University extension lectures are delivered at important country centres.

(vi) *University of Western Australia.* The University of Western Australia was established under an Act which received Royal assent on the 16th February, 1911, and the first Senate was appointed on the 13th February, 1912. There are now professorships in agriculture, biology, chemistry, English, geology, history and economics, mathematics and physics, and mining and engineering, in addition to ten lecturers and demonstrators, and seven associate lecturers. The Chair of Agriculture was endowed by Sir Winthrop Hackett. Students of the Perth Technical School and the Kalgoorlie School of Mines are admitted to the first year examinations in certain subjects provided they have matriculated. The institution was opened in March, 1913.

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 1917 :—

## UNIVERSITIES.—TEACHERS AND STUDENTS, 1917.

University.	Professors.	Lecturers.	Students attending Lectures.		
			Matriculated.	Non-matriculated.	Total.
Sydney .. .. .	30	135	1,355	381	1,736
Melbourne .. .. .	17	73	..	..	1,199*
Adelaide .. .. .	11	45	319	217	536†
Tasmania (Hobart) .. .. .	6	8	75	18	93
Queensland (Brisbane) .. .. .	4	21	202	25	227
Western Australia (Perth) .. .. .	8	10	148	88	236

\* Exclusive of 128 music students. † Exclusive of 202 music students.

3. **University Revenues.**—The income of the Universities from all sources during the year 1917 was as follows:—

**UNIVERSITIES.—REVENUE, 1917.**

University.	Government Grants.	Fees.	Other.	Total.
	£	£	£	£
Sydney .. .. .	61,654	13,489	28,499	103,642
Melbourne .. .. .	26,858	38,835	9,800	75,493
Adelaide .. .. .	12,747	9,871	5,512	28,130
Tasmania (Hobart) .. .	7,175	1,403	866	9,444
Queensland (Brisbane) .. .	15,300	3,908	2,835	22,043
Western Australia (Perth) .. .	16,320	1,314	961	18,595

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 Sydney.		University of Melbourne.		University of Adelaide.	
Donor.	Amount.	Donor.	Amount.	Donor.	Amount.
	£		£		£
J. H. Challis ..	250,750	Sir Samuel Wilson ..	30,000	Sir Thos. Elder ..	98,760
Sir P. N. Russell ..	100,000	James Stewart ..	25,624	Sir W. Hughes ..	20,000
Thos. Fisher ..	30,000	Hon. Francis Ormond	20,000	Hon. J. H. Angas ..	10,000
Edwin Dalton ..	8,000	John Hastie ..	19,140	R. Barr Smith ..	10,150
Hugh Dixon ..	7,050	Robert Dixon ..	10,837	Other donations	20,361
Hon. Sir W. Macleay	6,221	John Dixson Wyse-			
Mrs. Hovell ..	6,000	laskie ..	8,400		
Thos. Walker ..	6,200	David Kay ..	5,764		
Other donations ..	56,356	Henry Dwight ..	5,000		
		Wm. Thos. Mollison	5,000		
		Other donations ..	52,545		
<b>Total</b>	<b>£ 470,577</b>	<b>Total</b>	<b>£ 182,310</b>	<b>Total</b>	<b>£ 159,271</b>

In addition to the sum of £6,000 shewn above, the Hon. Sir W. Macleay also presented the Museum of Natural History to the University of Sydney.

The credit balances of some of the above endowments now amount to very considerable sums. For example, on the 31st December, 1917, the Challis Fund amounted to nearly £316,000, and the Fisher bequest to over £43,000. The cash balance at the end of 1917 on account of all private foundations to Sydney University stood at £571,760. In the case of Melbourne University the Stewart fund on the 31st December, 1917, stood at £30,450, the Hastie at £19,266, and the Dixon fund at £14,172.

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, the Hon. Francis Ormond's benefactions to Ormond College amounted to about £108,000. With a view to advancing the course of education in agriculture, forestry and allied subjects, Mr. Peter Waite transferred to the Adelaide University in 1914 the whole of the valuable Urrbrae estate at Glen Osmond. The estate comprises 134 acres of land with a fine mansion. Private benefactions to the University of Tasmania and the newly-established University of Queensland amount to £3,280 and £16,000 respectively. In connection with the latter, the trustees of the Walter and Eliza Hall Trust have endowed fellowships in engineering, economic biology, and pure and applied chemistry. In Western Australia the chair of Agriculture was founded by an endowment of Sir Winthrop Hackett, first Chancellor of the University, who made available also an annual sum of £900 for the establishment of a Department of Agriculture.

**4. University Extension.**—Extension lectures were instituted at Sydney University in 1886, but under a Statute of the Senate, 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 other States. In 1917 the average attendance at extension lectures in New South Wales was 195.

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 has varied in Victoria, the attendance at the various centres being estimated at 475 in 1916.

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.

The University of Tasmania provides for courses of extension lectures at various centres. Tutorial classes in Economics, History, Philosophy, and Literature are conducted in Hobart, and a class in Economics has been formed at Launceston. Attendance at extension lectures in 1917 numbered 131.

As pointed out previously, a correspondence study department has been inaugurated in connection with the University of Queensland in order to overcome, as far as possible, the difficulties of students who desire to benefit by University teaching, but who for various reasons are unable to attend the lectures. At present the work of this department is confined to the Arts course.

In Western Australia provision has been made for the giving of courses of extension lectures in Perth and suburbs, and also—by arrangement with local committees—in country centres. The professor of agriculture visits the chief farming districts for the purpose of giving lectures to, and holding conferences with the primary producers. Special short courses for farmers are given at the University. Short courses of popular lectures are also given in the evening by various professors at the University.

**5. Soldiers' Scholarships at British Universities.**—A scheme has been evolved under which men on active service with the military and naval forces of the Dominions may benefit by the facilities for special education afforded by British Universities and technological institutions. Funds have been made available to allow selected disabled soldiers and sailors to commence work as soon as they are fit to take up their studies. The Earl of Selborne has generously provided a number of scholarships, a large subscription

has been allotted from the Kitchener Memorial Fund, and the Rhodes' Trust has set apart several scholarships, some of which have been given to Australians. At present a small number of Australian soldiers are studying at Oxford, Cambridge, and Leeds. The scholarships are of the annual value of £150 to £250, and cover all expenses, including tuition fees and cost of living. They are granted with the proviso that those who hold them will follow up in their future professions and occupations the line of study embraced in the scholarships. The South African Government has offered twenty-five additional scholarships for South Africans, and in view of the possibilities of the scheme it is hoped that endowments will be provided by all the Dominion Governments.

**6. Workers' Educational Association.**—Chiefly as the result of a visit to Australia in 1913 by Mr. Mansbridge, Secretary of the Workers' Educational Association of Britain, a movement has been inaugurated having for its object the bringing of the University into closer relationship with the masses of the people, and thereby providing for the higher education of the workers in civic subjects. In New South Wales the Workers' Educational Association was at once formed, and similar branches of the movement have since been established in all the States of the Commonwealth and in New Zealand. The Government of New South Wales granted the University of Sydney the sum of £1,000 to initiate the scheme for tutorial classes. In that State the number of classes and study circles had grown by 1919 to between 40 and 50, and the number of students exceeded 1,000, while the Government grant has increased to £5,150. There are now direct grants from all State Governments except Western Australia, and a University grant in New Zealand. The particulars of grants for classes are as follow :—New South Wales, £5,150, 42 classes; Victoria, £1,500, 15 classes; Tasmania, £675, 5 classes; South Australia, £1,600, 5 classes; Queensland, £300, 5 classes; New Zealand, £1,500, 40 classes. The total number of students throughout Australasia is approximately 3,000, the greater number of whom are taking three-year courses while working at their daily occupations as artisans and clerical workers. The principal subjects chosen in all States are Industrial History, Economics, Political Science, and Sociology, while Psychology, Philosophy, Literature, and Biology are increasingly selected. Each University co-operates with the W.E.A. in the formation of a joint committee for tutorial classes, which elects tutors and generally supervises the work with the assistance of a University officer with the title of Director of Tutorial Classes. In addition to the longer and more serious courses, a great many preparatory classes and study circles are organised by the association, numerous courses of public lectures are delivered, and educational conferences promoted. In New South Wales the association organised an important representative conference on "Trade Unionism in Australia" in 1915, the report of which has been issued in book form. Another conference on the "Teaching of Sex Hygiene" was held in 1916, the report of which has passed through two large editions. A Commonwealth Conference held at Adelaide in 1918 resulted in the formation of a federal organisation, whose first president is Professor Meredith Atkinson, M.A., Director of Tutorial Classes, Melbourne University. The Federal Council co-ordinates the activities of the W.E.A. in all States, and has inaugurated a series of publications on sociological and economic subjects.

## § 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 Australia is comparatively insignificant. The question of apprenticeship is referred to in the sections dealing with "Manufacturing Industries" and "Labour and Industrial Statistics."

**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 were also erected in some of the chief country towns—at Maitland in 1890; Newcastle 1896; Bathurst 1898; Broken Hill 1898; Albury 1899; and Goulburn 1902. In other centres classes were established in various subjects whenever the prospects were sufficiently encouraging. Up to the year 1912 the provision for technical education is stated to have partaken more or less of the nature of successive accretions on the original humble beginnings, rather than to have aimed at development in accordance with a definite plan. With the systematisation of the other branches of education, the necessity for more effective organisation of the technical side became imperative, and in 1913 a rearrangement was effected. Under the new conditions Trade Schools will supersede the branch Technical Colleges, with the exception of that at Newcastle. Entrance to the Trades Schools will be conditional on a student being actively engaged in the trade concerned during the day and possessing a certain degree of preparatory knowledge. The latter qualification is assured by the possession of a certificate from a Commercial Superior Junior Technical School or an Evening Continuation Junior Technical School. It is proposed to build new Trades Schools in several of the suburbs of Sydney, and to establish institutions in the country wherever circumstances demand. The co-operation of both employers and employees has been sought and obtained, and while at first there will be some diminution in the number attending the classes, this will be counterbalanced by increased efficiency. At the beginning of 1913 a conference was held between the education authorities and leading employers and employees with a view to deciding on a scheme of organisation of the system of technical education. Sub-conferences were held for each trade or group of trades. In view of the information received, the Director of Education submitted a scheme to the Minister, and the scheme was approved at the end of November. Under the new plan the instruction will be given in two divisions—(1) Trade Courses; (2) Higher Technical Courses. Instruction in the trade courses will be really continuation trade instruction, *i.e.*, supplementary to actual workshop practice under an employer. Attempts to train youths to be tradesmen in the College will be abandoned, and only those actually engaged as apprentices or journeymen will be admitted to the college classes. Entrance tests are prescribed so as to ensure that students admitted to the courses will possess sufficient preparatory knowledge to benefit by them, but journeymen desirous of improvement may join at any time. Advisory committees have been appointed for each trade or group of trades. The first two or three years' course of instruction will be given in the Trade Schools, of which there are ten, and the last two or three years' at the Technical Colleges, of which there are three, one at Sydney, one at Newcastle, and one at Broken Hill. The higher courses will embrace instruction in advanced trades work qualifying for the position of manager or foreman, but no attempt will be made to train for the professional standing. It is hoped, however, that the scheme will develop so that part of the graduates may proceed to the University. Admission to the higher courses will eventually be restricted to those who have either graduated in the Trade Schools of the Department, or who evidence possession of a similar standard of knowledge. A liberal scheme of scholarships has been provided for students passing from the day or evening Junior Technical Schools or Domestic Science schools, to the Trades and Science Schools, as well as scholarships to the University at the close of the diploma course.

The table below gives some idea of the development of technical education in New South Wales during the five years 1913-17 :—

TECHNICAL EDUCATION, NEW SOUTH WALES, 1913 TO 1917.

Year.	Number of Classes.	Number of Enrolments.	Average Weekly Attendance.	Number of Lecturers and Teachers.	Fees Received.
					£
1913	582	16,193	12,214	286	13,760
1914	513	13,687	11,523	289	10,779
1915	519	13,000	9,257	298	9,830
1916	529	14,188	10,077	321	9,939
1917	544	15,065	11,072	354	9,354

At the beginning of 1913 the Sydney Technical High School and the Hurlstone Agricultural High School were removed from the control of the technical branch and placed under the Inspector of Secondary Schools. Reference to the Agricultural Colleges will be found in the section dealing with Agriculture.

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. Fine work was also done at the School of Mines in Bendigo, and later on excellent courses of training were evolved at the Working Men's College in Melbourne. 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. It is hoped that the Agricultural and District High Schools will serve as an effective connecting link between the ordinary State Schools and the Technical Schools, as also the Junior Technical Schools established in and around Melbourne, and at Ballarat, Bendigo, Geelong, Sunshine, and Warrnambool. At present there are 23 Technical Schools receiving State aid, and of these 7 afford instruction in Science, Art, Commercial and Trade subjects; 8 in Art, Trade, and Science; 2 in Art, Commerce, and Trade; 1 in Science, Commerce, and Art; 1 in Art and Commerce; while 3 confine their teaching to Art. The largest technical institution in Melbourne is the Working Men's College, founded in 1887. The College, in addition to giving instruction in a large number of technical subjects, is also a School of Mines. Six of the Schools, viz., the Working Men's College, and the Schools of Mines at Ballarat, Bendigo, Bairnsdale, Maryborough, and Stawell are classed as Certified Science Schools, and provide full courses in metallurgy and mining engineering, extending over three or four years. There are at the present time eleven Junior Technical Schools in existence, giving a two years' course of instruction to boys between the ages of 12½ and 15 years.

During the year 1916 a new Art School, costing £17,000, was opened at the Working Men's College, also an Art School at Ballarat at a cost of £8,600, and a Technical School at Brunswick, costing £8,400, while the Footscray Technical School cost £6,650.

The Committee of the Mechanics' Institute at Prahran has erected a building at a cost of £17,000, to a design approved by the Department, and has made it available without rent as a Technical School, the Department undertaking the expenses of equipment and maintenance.

In his report for 1913-14, the Chief Inspector of Technical Schools alludes to the necessity for an Employment Officer, in order to ensure that boys who have had vocational training will be able to find suitable situations when their term has expired.

#### TECHNICAL EDUCATION, VICTORIA, 1913 TO 1917.

Year.	Number of Classes.	Number of Enrolments.	Fees Received.
1913 .. .. .	92	9,036	£ 13,054
1914 .. .. .	103	10,249	12,968
1915 .. .. .	110	10,782	14,992
1916 .. .. .	104	12,049	16,439
1917 .. .. .	106	12,139	18,836

The average attendance in 1914 was 6,487, in 1915, 6,852, in 1916, 7,724, and in 1917, 8,736.

4. **Queensland.**—The control of technical education in Queensland was removed from the hands of the local Committee in 1905, and vested in the Education Department. At present the Director is assisted in his administration by a Superintendent, and an Inspector of Technical Colleges. During 1917 there were fifteen colleges in operation—Bowen, Bundaberg, Cairns, Brisbane Central, Charters Towers, Gympie, Ipswich, Mackay, Maryborough, Mount Morgan, Rockhampton, Sandgate, Toowoomba, Townsville, Warwick, and branch classes of these colleges were held in various country centres. The progress of technical education since 1913 is shewn in the following table:—

TECHNICAL EDUCATION, QUEENSLAND, 1913 TO 1917.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
1913	353	7,958	6,009	247	£ 11,069
1914	355	7,820	6,481	255	11,326
1915	358	7,522	6,258	271	10,761
1916	365	8,644	8,500	283	12,024
1917	388	9,632	7,800	310	15,274

Greater attention is being devoted to the development of trade classes, and the Technical College authorities have been assisted by the University professors in the preparation of a properly organised system of Trade instruction. Full time Commercial Day Schools are in operation at Warwick, Ipswich, Brisbane, and Townsville. Preparatory Day Trade Schools have been established in connection with the Central and Ipswich Technical Colleges. Trade Advisory Committees have been inaugurated in connection with several of the subjects of instruction at the Central Technical College. Compulsory attendance at technical classes in various districts has been provided for by industrial awards, the decisions so far—with the exception of Printing—being confined to trades connected with Engineering and Metal Working. The Department now pays about £2,000 per annum to the Technical Colleges for the instruction of selected State School pupils in approved subjects. Tuition by correspondence is given by the Central Technical School. It is believed that the raising of the school age to fourteen years, coupled with the establishment of High Schools, will result in a more effective co-ordination between ordinary and technical education in the State. At present the Colleges are assisting in the training of returned soldiers, and at the end of 1917, 143 soldier students were receiving instruction in book-keeping, wool-classing, motor mechanics, sugar chemistry, and various other subjects, while 82 had entered employment in occupations for which they had been prepared at the College.

5. **South Australia.**—Prior to the year 1917 the condition of affairs in regard to technical education in Australia was regarded by the Education Department as unsatisfactory. There was a School of Mines and Industries in Adelaide, and in addition Schools of Mines at Moonta, Port Pirie, Kapunda, Mount Gambier, and Gawler. While the Government bore the bulk of the cost of maintenance of these institutions, they were controlled by independent councils, and there was no regular co-ordination in regard to staffs, curriculum, etc. The Education Department has now taken over the administration of Technical Education. A Director of Technical Education was appointed in 1916, and the work of reorganisation of the system was continued in 1917. A suitable area has been acquired for the erection of a Government Technical School in Adelaide to accommodate between 300 and 400 junior students, with provision for evening students. At Port Pirie a Junior and Senior Technical School is to be established, the latter side to specialise in metallurgy. The work of the existing country schools was continued in 1917, but new Councils were appointed, and regulations for the conduct of the schools have been prepared.

## TECHNICAL EDUCATION, SOUTH AUSTRALIA, 1913 TO 1917.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
1913 .. .. .	218	4,885	3,473	115	£ 3,459
1914 .. .. .	229	4,947	3,508	127	3,365
1915 .. .. .	228	5,402	3,645	126	3,272
1916 .. .. .	203	5,335	4,520	119	3,221
1917 .. .. .	195	6,273	5,307	105	3,974

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, and the remodelled institution was opened in 1910. The school is affiliated to the University. There are branch institutions at Midland Junction, Fremantle, Claremont, Kalgoorlie, Boulder, Geraldton, Bunbury, Coolgardie, and Albany. In addition, Continuation Classes are held at various centres. 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. Advanced work at present is taken only in Perth, Fremantle, Boulder, and in Kalgoorlie by the School of Mines, the other branches dealing almost entirely with preparatory work, chiefly in Continuation Classes. Until the establishment of the local University, the Perth Technical School was affiliated with Adelaide University. Over 100 railway apprentices regularly attend the special classes held at Midland Junction.

At present pupils leaving the State Schools at the age of 14 to take up employment may by attendance at evening classes qualify for free admission to the Technical Schools. Those with leaving certificates from the eighth standard, and others able to devote their full time to study, may obtain day instruction at the Technical Schools in subjects bearing on their intended occupations, or may qualify for a more extended course, including graduation at the University. Returns for the last five years are embodied in the table hereunder :—

## TECHNICAL EDUCATION, WESTERN AUSTRALIA, 1913 TO 1917.

Year.	Number of Classes.	Enrolments.	Number of Teachers.	Fees Received.
1913 .. .. .	230	2,346	77	£ 1,941
1914 .. .. .	306	3,353	89	969
1915 .. .. .	313	3,184	96	928
1916 .. .. .	369	3,757	103	1,058
1917 .. .. .	439	5,100	120	1,083

The average attendance at classes in 1915 was 1,920, in 1916, 2,366, and in 1917, 2,767.

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 Schools of Mines at Beaconsfield and Queenstown, and Technical Schools at Hobart and Launceston. In the report of the Commission appointed in 1916 to enquire into the condition of technical education in Tasmania, allusion was made to the want of co-ordination between these institutions and the Education Department, and it was recommended that the schools should be taken over by the Government, and a trained technologist appointed as organising inspector.

The inspector was appointed in 1917, but some time must elapse before the recommendations of the Commission can be fully dealt with. Statistics for the last five years are as follows :—

**TECHNICAL EDUCATION, TASMANIA, 1913 TO 1917.**

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
1913 .. .. .	76	1,013	787	41	£ 918
1914 .. .. .	78	900	700	40	936
1915 .. .. .	85	955	545	40	874
1916 .. .. .	69	882	433	37	992
1917 .. .. .	68	829	470	38	871

8. Attendance at Commonwealth Technical Schools.—The table hereunder shews the enrolment and attendance at Technical Schools and classes in the Commonwealth during 1917 :—

**ENROLMENT AND ATTENDANCE AT TECHNICAL SCHOOLS, ETC., 1917.**

(COMMONWEALTH.)

State.	Enrolment.	Average Attendance.
New South Wales .. .. .	15,065	11,072
Victoria .. .. .	12,139	8,736
Queensland .. .. .	9,632	7,800
South Australia .. .. .	6,273	5,307
Western Australia .. .. .	5,100	2,767
Tasmania .. .. .	829	470
Commonwealth .. .. .	49,038	36,152

9. Expenditure on Technical Education.—The expenditure on technical education in each State during the period 1913 to 1917 is shewn below :—

**EXPENDITURE ON TECHNICAL EDUCATION, 1913 TO 1917.**

(COMMONWEALTH.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.
	£	£	£	£	£	£	£
1913 ..	132,305	49,139	63,589	14,769	26,886	3,529	290,217
1914 ..	72,718	73,654	83,722	15,720	13,552	3,493	262,859
1915 ..	78,129	77,852	69,740	16,173	10,375	3,906	256,175
1916 ..	102,139	94,098	41,083	17,614	10,849	4,438	270,221
1917 ..	110,796	93,661	42,505	20,265	11,544	3,915	287,686

The figures in the preceding table represent an expenditure of about 1s. 2d. per head of the population of the Commonwealth, as compared with 16s. 3d. 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. Expenditure on buildings, included in the foregoing totals, comprises £20,163 in New South Wales, £10,603 in Victoria, £4,599 in Queensland, and £672 in Western Australia.

**§ 7. Business Colleges and Shorthand Schools.**

There has been considerable development in recent years both in the number and scope of privately conducted institutions, which aim at giving instruction in business methods, shorthand, typewriting, the use of calculating machines, etc. Particulars for all States excepting Queensland are given in the following table :—

## BUSINESS COLLEGES, SHORTHAND SCHOOLS, ETC., 1917.

State.	Schools.	Teachers.	Students Enrolled.		Average Attendances.		Fees Received.
			Males.	Females.	Males.	Females.	
New South Wales ..	17	123	2,567	5,190	1,021	1,853	£ 34,899
Victoria ..	16	187	4,100	3,041	3,029	2,275	†
Queensland*	..	..	..	..	..	..	..
South Australia ..	5	49	798	1,442	441	785	12,777
Western Australia	10	56	520	723	†	†	8,540
Tasmania ..	3	9	66	284	31	137	2,931

\* Included in private schools. † Not available.

The figures for New South Wales are exclusive of students instructed at home through the medium of correspondence classes.

In Victoria it is explained that the preponderance of male students is due to the larger enrolment of males in the correspondence classes.

## § 8. 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 1911.

(COMMONWEALTH.)

State or Territory.	1861.	1871.	1881.	1891.	1901.	1911.	
N.S.W.*	Read & write	188,543	296,741	507,067	835,562	1,071,935	1,379,631
	Read only ..	46,024	56,391	49,372	43,539	29,728	6,442
	Cannot read	116,293	149,866	193,386	244,853	253,183	260,661
Victoria	Read & write	328,362	478,464	653,346	908,490	998,010	1,136,289
	Read only ..	57,351	70,953	47,950	32,794	21,852	4,630
	Cannot read	152,915	180,781	160,270	198,556	181,208	174,632
Q'land	Read & write	17,152	74,940	136,436	276,381	376,294	508,703
	Read only ..	3,680	12,080	13,657	14,618	11,737	3,416
	Cannot read	9,227	33,084	63,432	102,719	110,098	93,694
S. Aust.†	Read & write	72,190	117,349	200,057	236,514	290,748	344,095
	Read only ..	18,535	21,509	15,267	9,571	8,283	1,785
	Cannot read	36,105	46,768	64,541	74,346	64,126	62,678
W. Aust.	Read & write	7,683	14,166	19,684	34,254	150,099	237,629
	Read only ..	1,301	2,717	2,430	2,061	3,107	917
	Cannot read	5,853	7,902	7,594	13,467	30,918	43,568
Tasm'nia	Read & write	48,282	55,941	74,966	103,138	133,579	155,295
	Read only ..	13,136	13,946	9,606	6,287	3,907	918
	Cannot read	28,559	29,441	31,133	37,242	34,989	34,998
Northern Ter.‡	Read & write	..	..	..	..	..	2,397
	Read only ..	..	..	..	..	..	34
	Cannot read	..	..	..	..	..	879
Federal Ter.§	Read & write	..	..	..	..	..	1,424
	Read only ..	..	..	..	..	..	14
	Cannot read	..	..	..	..	..	276
C'wealth	Read & write	662,212	1,037,601	1,591,556	2,394,339	3,020,665	3,765,463
	Read only ..	140,027	177,596	138,282	108,870	78,614	18,156
	Cannot read	348,952	447,842	520,356	671,183	674,522	671,386

\* Including Federal Territory prior to 1911. † Including Northern Territory prior to 1911.  
 ‡ Included in South Australia prior to 1911. § Included in New South Wales prior to 1911.

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 1911.

(COMMONWEALTH.)

Division.	1861.	1871.	1881.	1891.	1901.	1911.
Read and write	5,752	6,239	7,073	7,543	8,004	8,452
Read only ..	1,217	1,068	615	343	208	41
Cannot read ..	3,031	2,693	2,312	2,114	1,788	1,507

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 1911.

(COMMONWEALTH.)

State or Territory.	1861.	1871.	1881.	1891.	1901.	1911.	
N.S.W.*	Read & write	34,040	68,776	121,735	196,240	251,187	291,450
	Read only ..	20,345	26,886	25,100	21,375	15,934	993
	Cannot read	25,472	32,924	41,663	48,580	60,734	34,793
Victoria	Read & write	42,268	122,739	170,713	201,199	236,515	237,028
	Read only ..	25,518	39,636	25,249	15,656	13,128	410
	Cannot read	19,341	29,490	21,421	27,441	27,765	19,621
Q'land	Read & write	2,156	12,698	33,317	62,402	95,635	117,347
	Read only ..	1,534	6,104	7,019	7,580	5,955	616
	Cannot read	1,629	6,015	9,615	16,257	18,827	8,633
S. Aust.†	Read & write	15,485	30,608	46,630	58,291	69,451	69,878
	Read only ..	8,748	12,432	7,926	4,618	4,229	248
	Cannot read	6,907	10,074	12,483	17,988	15,480	9,638
W. Aust.	Read & write	1,333	3,218	4,418	6,910	25,326	47,568
	Read only ..	226	617	1,260	933	1,815	159
	Cannot read	1,015	1,795	1,593	2,348	5,431	5,234
Tasm'nia	Read & write	11,919	17,335	17,188	24,007	32,890	36,351
	Read only ..	2,848	4,143	4,108	2,974	1,795	186
	Cannot read	4,581	6,663	6,606	8,829	8,475	5,575
Northern Ter.‡	Read & write	..	..	..	..	..	195
	Read only ..	..	..	..	..	..	..
	Cannot read	..	..	..	..	..	118
Federal Ter.§	Read & write	..	..	..	..	..	322
	Read only ..	..	..	..	..	..	2
	Cannot read	..	..	..	..	..	47
C'wealth	Read & write	107,201	255,374	394,001	549,049	711,004	800,139
	Read only ..	59,219	89,818	70,662	53,136	42,856	2,614
	Cannot read	58,945	86,961	93,381	121,443	136,712	83,659

\* Including Federal Territory prior to 1911. † Including Northern Territory prior to 1911.  
 ‡ Included in South Australia prior to 1911. § Included in New South Wales prior to 1911.

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 may 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 1911 shew that the proportion of those who could read and write had increased to over 90 per cent., while the totally ignorant had declined by nearly two-thirds.

EDUCATION OF CHILDREN (AGES 5 TO 14) PER 10,000 AT CENSUS PERIODS,  
1861 TO 1911.

(COMMONWEALTH.)

State or Territory.	1861.	1871.	1881.	1891.	1901.	1911.	
N.S.W.*	Read & write	4,263	5,349	6,458	7,372	7,662	8,907
	Read only..	2,547	2,091	1,332	803	486	30
	Cannot read	3,190	2,560	2,210	1,825	1,852	1,063
Victoria	Read & write	4,851	6,397	7,853	8,236	8,526	9,221
	Read only..	2,929	2,066	1,162	641	473	16
	Cannot read	2,220	1,537	985	1,123	1,001	763
Q'land	Read & write	4,053	5,116	6,670	7,236	7,942	9,269
	Read only..	2,884	2,460	1,405	879	495	49
	Cannot read	3,063	2,424	1,925	1,885	1,563	682
S. Aust.†	Read & write	4,973	5,763	6,956	7,206	7,790	8,761
	Read only..	2,809	2,341	1,182	571	474	31
	Cannot read	2,218	1,896	1,862	2,223	1,736	1,208
W. Aust.	Read & write	5,179	5,716	6,076	6,780	7,775	8,982
	Read only..	878	1,096	1,733	916	557	30
	Cannot read	3,943	3,188	2,191	2,304	1,668	988
Tasm'nia	Read & write	6,160	6,160	6,160	6,704	7,820	8,632
	Read only..	1,472	1,472	1,472	830	416	44
	Cannot read	2,368	2,368	2,368	2,466	1,964	1,324
Northern Ter.‡	Read & write	..	..	..	..	..	6,230
	Read only..	..	..	..	..	..	..
	Cannot read	..	..	..	..	..	3,770
Federal Ter.§	Read & write	..	..	..	..	..	9,868
	Read only..	..	..	..	..	..	5
	Cannot read	..	..	..	..	..	127
C'wealth	Read & write	4,757	5,910	7,061	7,588	7,984	9,027
	Read only..	2,628	2,078	1,266	734	481	29
	Cannot read	2,615	2,012	1,673	1,678	1,535	944

\* Including Federal Territory prior to 1911.

† Including Northern Territory prior to 1911.

‡ Included in South Australia prior to 1911.

§ Included in New South Wales prior to 1911.

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 nine years, was as follows. The figures refer to marriages in the Commonwealth in respect of which information was obtainable.



## ILLITERACY SHOWN BY MARRIAGE SIGNATURES, 1861 TO 1917.

(COMMONWEALTH.)

Year.	Proportion Signing with Marks of Total Persons Married.			Year.	Proportion Signing with Marks of Total Persons Married.		
	Males.	Females.	Total.		Males.	Females.	Total.
	Per cent.	Per cent.	Per cent.		Per cent.	Per cent.	Per cent.
1861 ..	18.50	30.69	24.60	1911 ..	0.56	0.54	0.55
1871 ..	10.58	16.40	13.49	1912 ..	0.43	0.45	0.44
1881 ..	4.34	6.78	5.56	1913 ..	0.36	0.38	0.37
1891 ..	2.27	2.40	2.34	1914 ..	0.41	0.38	0.39
1901 ..	1.35	1.29	1.32	1915 ..	0.27	0.27	0.27
1909 ..	0.65	0.62	0.64	1916 ..	0.37	0.32	0.35
1910 ..	0.56	0.59	0.58	1917 ..	0.37	0.31	0.34

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 during the later years the rates have been very even.

## § 9. 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 a Society was founded in Sydney as far back as 1821, 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 various Societies until the year 1850, when the Australian Philosophical Society was founded. This Society is the progenitor of the present Royal Society of New South Wales, the latter title dating from the 12th December, 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" were issued in 1867, the title of the series being altered to "Journal" in 1876. Up to 31st March, 1918, 52 volumes had been published. The exchange list comprises the names of 360 kindred societies. At the present time the library contains about 25,000 volumes and pamphlets, valued at about £7,000. Income and expenditure for the year ended 31st March, 1918, were £1,337 and £1,124 respectively, and the Society had on the same date 307 members.

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, whilst 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 1918, 64 volumes of proceedings had been issued. The Society exchanges with 320 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 over 12,000 volumes, valued at £3,200. Income for the year 1918 amounted to £440, and expenditure to £420. There are 170 members on the roll.

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 the end of 1918 the members numbered 88; publications issued, 30 volumes; library, 6,000 volumes; societies on exchange list, 161. Income and expenditure in 1918 amounted to £170 and £166 respectively.

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 society became purely scientific. 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. In 1918 the number of members was 92. The income for the year 1918 was £526, and expenditure £445. Up to 1918 the Society had issued four volumes of proceedings and six parts of memoirs, exclusive of several individual papers published in earlier years. The exchange list numbers about 194, while the library contains 3,400 volumes and over 1,600 pamphlets.

Permission to assume the title of Royal Society was granted to the Natural History and Science Society of Western Australia in March, 1914. 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 issue of reports of proceedings. It numbers at present 97 members, whose subscriptions form its main source of revenue, the income and expenditure in 1918 being respectively £75 and £88. Five volumes of proceedings were issued as *Journal of the Natural History and Science Society of Western Australia*, and four as of the Royal Society. Its publications are exchanged with 120 institutions at home and abroad. The library contains 200 volumes, besides 350 unbound journals, pamphlets, etc.

The Royal Society of Tasmania (the first Royal Society outside the United Kingdom) was inaugurated by Sir Eardley Wilmot, Lieutenant-Governor of Van Diemen's Land, on the 14th October, 1843. It may be mentioned, however, that a scientific society had been formed as far back as 1838 under the presidency of Sir John Franklin, then Governor of the colony, and in 1841 the number of resident members was 31, and corresponding members, 38. The meetings of this parent society were held at Government House, and three volumes of proceedings were issued. A large portion of the Colonial Gardens, together with a grant of £400, was given to the Society. A library and museum were established in 1848. In 1885 the museum and gardens were given back to the State, the Society being granted room in the museum for its library and meetings. 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 57 annual volumes of proceedings, possesses 124 members, 13 corresponding members, exchanges with 216 kindred bodies, and has a library containing 13,000 volumes, in addition to manuscripts, etc., valued at over £4,000. Income for the year 1918 was £258, and expenditure £287.

(b) *Other Scientific Societies.* The Australasian Association for the Advancement of Science, founded in 1888, has its headquarters in Sydney. It meets usually in each State biennially in turn. Its receipts to date were about £14,000, including Government aid to the amount of £4,000. The library contains 4,000 volumes, valued at £400. Up to date, 14 volumes of proceedings have been issued. The exchange list numbers 176. The Linnean Society of New South Wales, with headquarters in Sydney, was founded in 1875, and possesses a library of 10,000 volumes, valued at £6,000. Up to date 42 volumes of proceedings have been issued. Exchanges number 188. This Society maintains five investigators engaged in research work, and owes its development almost entirely to the benefactions of Sir William Macleay. The number of ordinary members at the end of 1917 was 154. Income for the year came to £1,245, and expenditure to £929. The special revenue for research purposes only was £2,849, and the expenditure £2,314. The British Astronomical Society has a branch in Sydney, and in some of the States the British Medical Association has branches.

The Chemical Society of Western Australia was founded in 1915, for the promotion of the study of Chemistry and the furtherance of the interests of professional chemists. Meetings are held monthly. There is a council consisting (in 1917) of seven members.

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 1,700, and the number of books contained therein is estimated at about four millions. In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favourably with similar institutions elsewhere. The new reading room at the Melbourne Library ranks amongst the finest in the world. It was opened in November, 1913, and has a diameter of 114 feet, with a similar height, and is capable of seating 320 readers at a time, all of whom are under efficient supervision from the centre of the room. The following statement gives the number of volumes in the Public Library of each capital city :—

#### METROPOLITAN PUBLIC LIBRARIES.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Sydney .. .. .	295,493	*	13,487	308,980
Melbourne .. .. .	251,294	34,967	..	286,261
Brisbane .. .. .	40,078	..	..	40,078
Adelaide .. .. .	102,530	32,807	..	135,337
Perth .. .. .	107,189	13,410	..	120,599
Hobart .. .. .	21,000	..	..	21,000

\* The maintenance and control of the lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. At the end of December, 1917, the books numbered 26,000.

The Mitchell Library in Sydney consisted of over 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia, valued at £100,000, and bequeathed in 1907 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. There are now 96,000 volumes in the library. During 1917 the Mitchell Library was further enriched by a donation of 3,676 printed volumes, 117 volumes of manuscript, and 235 pamphlets from the working library of the late John Tebbutt, of Windsor, the well-known astronomer. A very fine collection of postage and fiscal stamps, estimated by philatelists to be worth at least £15,000, was presented to the trustees by Mr. H. L. White, of Belltrees, near Scone, in June of the same year. The Fisher Library at the Sydney University contains 100,000 volumes.

For some years past efforts have been made in South Australia to collect original documents likely to be of service in compiling a history of the State, and recently the question of founding a Public Records or Archives Office to house them has been under consideration. So far back as 1914 Professor Henderson, of Adelaide University, under commission from the South Australian Government, visited and reported on the system of keeping archives in England, France, Belgium, Holland, and Ceylon, and obtained valuable information also from the United States and Canada. Although owing to financial considerations it has not yet been possible to erect the necessary buildings for the department of historical documents, valuable preliminary work has been done in connection with the examination, classification, and permanent preservation of the available papers.

The library at Launceston, in Tasmania, contains 29,000 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 BOOKS THEREIN.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.
Number of libraries	*	472	231	210	251	31	3
Estimated number of books ..	1,250,000	1,165,000	376,000	573,000	253,000	108,000	5,000

\* Not available.

The figures in the above table can be taken only as approximations, as in many instances returns were not received from various institutions. The return for New South Wales includes the Public Library, the Mitchell Library, and the Sydney Municipal Library. Amongst other important libraries not included, may be enumerated those at the Sydney University and the Australian Museum, which contain 117,000 and 22,000 volumes respectively, and the Parliamentary Library with over 52,000 volumes. There are also over 2,700 libraries, with an estimated total of 362,000 volumes, attached to State Schools.

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 £79,000. The number of visitors to the institution in 1917 was 179,000, and the average attendance on week-days 485, and on Sundays 971. The expenditure for 1917 amounted to £9,121. A valuable library containing over 22,000 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 all accessible to the public. There is a fine Technological Museum in Sydney, with branches in six country centres, the combined institutions containing over 120,000 specimens. Valuable research work has been undertaken by the scientific staff in connection with oil and other products of the eucalyptus. The number of visitors at the Technological Museums during 1917 was about 240,000.

The National Museum at Melbourne, devoted to Natural History, Geology, and Ethnology, is located in the Public Library Building. The National Art Gallery is also situated in the same building. The Industrial and Technological Museum, opened in 1870, contains about 9,000 exhibits. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, 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 £91,815, of which buildings absorbed £19,589, purchases £27,999, and salaries £44,426. The number of visitors during the year was 70,154, of whom 23,038 visited the institution on Sundays. The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

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 84,000 visitors in 1917.

The latest available returns show that the Western Australian Museum contains altogether 89,000 specimens, of an estimated value of £78,500. The Museum is housed in the same building as the Art Gallery, and the visitors to the combined institutions during the year reached 85,000. The expenditure for the year 1917-18 was £1,773, and the Government grants for the year amounted to £2,050.

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 £600. The Hobart institution cost £9,500 to construct, and that at Launceston £6,000.

**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 National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction is returned at £94,000. The contents, which are valued at £152,000, comprise 443 oil paintings, 413 water colours, 653 black and white, 168 statuary and bronzes, and 440 ceramics, works in metal and miscellaneous. During 1917 the average attendance on week days was 444, and on Sundays 1,735.

The National Gallery at Melbourne at the end of 1917 contained 584 oil paintings, 4,686 objects of statuary, bronzes and ceramics, and 14,125 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 £325,000. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. At the end of 1917 the Ballarat Art Gallery contained 222 oil paintings and 169 water colours, etc., while there are some valuable works of art in the smaller galleries at Bendigo, Castlemaine, Geelong, and Warrnambool.

The Queensland National Art Gallery, situated in the Executive Buildings, Brisbane, was founded in 1895, and contains a small, but well chosen, collection of pictures. At latest available date there were on view 93 oil paintings, 23 water colours, 99 black and white, and 29 pieces of statuary, together with various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £10,000.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 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 bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and of £3,000 in 1907 from Mr. David Murray. At the latest available date there were in the Gallery 229 oil paintings, 69 water colours, and 24 statuary. Building and site are valued at upwards of £31,000. Visitors during the year 1917 numbered 86,000.

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 96 oil paintings, 51 water colours, 192 black and white, 265 statuary, and miscellaneous metal works, etc.

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. The building is valued at £9,500.

The Art Gallery at Launceston was erected in 1888 at a cost of £5,000, and opened on the 2nd April, 1891. Only a small proportion of the contents belong 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 £5,000. The building is valued at £6,000. Average attendance of visitors on week days is returned as 96 and on Sundays 200.

5. State Expenditure on all Forms of Educational Effort.—The expenditure from the Consolidated Revenue in each State and Territory 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, 1913-14 TO 1917-18.

State or Territory.		1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
New South Wales	Total £	1,735,404	1,651,571	1,717,040	1,870,043	1,968,366
	Per head	18/11	17/9	18/4	20/0	21/0
Victoria	Total £	1,147,319	1,218,459	1,161,335	1,171,757	1,227,629
	Per head	16/3	17/0	16/5	16/9	17/6
Queensland	Total £	702,491	807,915	703,664	763,591	827,332
	Per head	21/6	23/10	20/8	22/10	24/4
South Australia	Total £	342,209	342,464	337,307	376,730	397,210
	Per head	15/6	15/6	15/4	17/5	18/5
Western Australia	Total £	349,371	351,516	348,344	368,603	397,661
	Per head	21/9	21/9	21/11	23/10	25/9
Tasmania	Total £	112,364	124,791	127,016	132,590	140,766
	Per head	11/2	12/5	12/7	13/3	14/2
Northern Territory	Total £	3,916	2,073	2,180	2,257	2,479
	Per head	21/4	10/5	9/7	9/6	..
Commonwealth	Total £	4,393,074	4,498,789	4,396,886	4,685,571	4,961,443
	Per head	18/0	18/3	17/10	19/1	20/3

The comparatively heavy increases in Queensland and Western Australia since 1912 are due to the inclusion of expenditure in connection with the newly-established Universities in those States, and in the case of the latter, also, to large increases in teachers' salaries and allowances.