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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.* Amongst the more important developments in this State may be mentioned the new scheme of secondary education, which came into operation in 1911, and which provides for courses of study extending over four years, for new conditions of entrance, and for the abolition of fees in the Public High Schools. The courses of study are designed to furnish a preparation for various types of vocation, and have been arranged in four groups:—(1) General course leading to the professional studies of higher institutions; (2) a commercial course; (3) a technical course, and (4) a domestic course.

The regulations provide for certificates marking three definite stages in the course—(a) the “qualifying” certificate, shewing that the holder has completed the primary course; (b) the “intermediate” certificate, marking the end of the first two years of High School course; and (c) the “leaving” certificate, indicating the successful graduation through the whole course and the passing of the prescribed final examination. Arrangements have been made with the University authorities for the acceptance of the leaving certificate in lieu of the matriculation examination.

The passing of the University (Amendment) Act of 1912 constitutes an epoch-making event in the history of educational development in New South Wales. It is claimed that the enactment of this measure completes the chain of co-ordination in the State educational system. Under a liberal provision of scholarships and bursaries it is now possible for the poorest child, without expense to his parents, to pass through the various stages from kindergarten to any of the faculties at the University. More extended reference to the University Act will be found in § 5 (i.) hereinafter.

(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. 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. A Council of Public Education has been appointed to advise on educational matters generally, and

particularly in regard to co-ordination. Amongst the new features recently introduced are the recasting of the scheme of study for primary schools and the inauguration of a uniform school year. 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.

(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 being paid 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.

(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. It is proposed also to fall into line with the other States in the matter of medical supervision of school children, and provision has been made for the appointment of a medical officer, a dental officer, and two trained nurses. The changes introduced at the Teachers' Training College have proved very satisfactory, and the academic teaching at the University is now supplemented by systematic pedagogic instruction for all classes of teachers. In their reports for the year 1912, the inspectors state that the improved quality of the work in many of the smaller country schools is due to the training which the State provides for teachers prior to their appointment.

(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 towards the removal of the abstract and to the development of the imaginative and constructive throughout all grades. The scheme of bringing about a closer correlation between primary and secondary education was further advanced during the year. The Modern School, opened in 1911, was strengthened, and it is proposed to establish High Schools at the larger country centres. In the smaller towns facilities are to be given to children who propose to remain in the upper classes. School-leaving Certificates will confer the right of admission to the Arts and Science courses at the University, and special provision will be made for pupils desirous of qualifying for commercial or agricultural pursuits.

(vi.) *Tasmania.* The most important features in the development of education in Tasmania during 1912 were the establishment of subsidised schools, the taking of preliminary steps towards the establishment of State High Schools, and the adoption of more effective measures to secure regular attendance.

(vii.) *Present Position of State Education in Australia.* Throughout Australia primary education is compulsory and free, while there exists in most of the States a liberal provision of scholarships and bursaries to the Higher State Schools, to the Secondary Schools, and to the Universities.¹ Provided that the requisite standard is reached, it is, of course, permissible for children to receive home tuition, or to attend so-called private

1. Universities have been in existence for some time in New South Wales, Victoria, South Australia, and Tasmania. The University of Queensland was opened in March, 1911, and a University was opened in 1913 in Western Australia.

schools. Considerable interest is taken in educational matters by the people of the Commonwealth, and within the last few 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 and 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, par. 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 pupils. Moreover, as will be seen from the above and from § 2, par. 6, 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 these officers consists in guiding and directing the teaching in accordance with approved methods.

(viii.) *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.

§ 2. State Schools.

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

2. **Enrolment and Attendance.**—The following table shews the number of State Schools, together with the teachers employed and the enrolment and "average attendance" in each State during the year 1912:—

STATE SCHOOLS, TEACHERS, AND SCHOLARS, 1912.

(COMMONWEALTH.)

State or Territory.	Schools.	Teachers.*	Scholars Enrolled.	Average Attendance.
New South Wales†	3,234	6,454	235,803	171,028
Victoria	2,178	5,567	209,209	154,410
Queensland	1,278	2,992	95,641	77,385
South Australia	768	1,473	58,273	40,838
Western Australia	536	1,189	38,184	32,959
Tasmania	396	840	25,368	19,561
Northern Territory	3	3	98	71
Commonwealth	8,393	18,518	662,576	496,252

* 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 average attendance at High Schools in South Australia is not recorded, and the necessary figures were obtained by an estimate based on enrolment. In the case of Victoria, returns were not available in regard to attendance at District High Schools and Higher Elementary Schools, and these totals were similarly estimated. That the educational statistics of each State of the Commonwealth should be made up in the same way is much to be desired.

The enrolment and average attendance at the State Schools in the Commonwealth are given below for the years 1891, 1901, and for each year of the period 1908 to 1912:—

ENROLMENT AND ATTENDANCE AT STATE SCHOOLS, 1891 to 1912.
(COMMONWEALTH.)

Year.	Total Population. ¹	Enrolment.	Average Attendance.	Year.	Total Population. ¹	Enrolment.	Average Attendance.
1891	3,240	561,153	350,773	1910	4,425	627,910	455,870
1901	3,824	638,478	450,246	1911	4,569	638,850	463,799
1908	4,232	618,836	446,146	1912	4,733	652,576	496,252
1909	4,323	624,236	458,260				

1. In thousands.

It will be seen from the above table that, despite the increase of population, the official figures of enrolment and average attendance at the State Schools of the Commonwealth shew unsatisfactory results, although an upward tendency is evident in the figures for 1911 and 1912. An examination of the graphs on pages 204 to 206, shewing birth-rate, will make it apparent that this is at least in part due to the diminished birth-rate of past years.

Schools in the Federal Capital Area. During the year 1912, twelve State Schools were in operation in the Federal Territory (Yass-Canberra). The pupils enrolled numbered 297 and the average attendance 186. Cost of upkeep in 1912 amounted to £2473.

3. 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 twelve schools. In 1912 subsidy was paid for conveyance to eighty schools.

4. Education in Sparsely-settled Districts.—It has always been the aim of the State to carry the benefits of education into the remotest and most sparsely-settled districts. This is effected in various ways. (i.) By the establishment of Provisional Schools, *i.e.*, small schools in which the attendance does not amount to more than about a dozen pupils, these institutions merging into the ordinary public school list when the attendance exceeds the minimum. (ii.) When there are not enough children to form a provisional school, what are known as Half-time Schools are formed, the teacher visiting them on alternate days. In still more sparsely-peopled districts an itinerant teacher goes from house to house within a certain radius. Thus in Queensland during 1912 the seventeen itinerant teachers covered 490,000 square miles of country and travelled 55,320 miles. 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 1912 the Education Department in Western Australia disbursed over £2000 in "driving grants," i.e., sums of money granted to parents whose homes are over three miles from the nearest school, and who arrange to have their children driven in. In New South Wales and Western Australia 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. (iii.) 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. (iv.) 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 1912 numbered 13, with an enrolment of 138 scholars. During the year the department also paid for the conveyance of 363 children to schools by boat, vehicle, or train.

5. **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 there were, during 1912, three Evening Primary Schools, but seven others were absorbed by the Evening Continuation Schools; Victoria had six schools, with enrolment of 547, and an average attendance of 192; and Western Australia has continuation classes in the chief centres. Up to the end of 1910 the evening schools in New South Wales aimed chiefly at giving primary instruction, but in October of that year Evening Continuation Schools of two types were established—(i.) Artisan Schools for boys learning trades; and (ii.) Commercial Schools for boys starting in business. In December, 1912, there were thirty-one schools in operation in the metropolitan district, and seventeen in the country districts. The total weekly attendance for the year was 1852. 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.

6. **Higher State Schools.**—(i.) In *New South Wales* public schools, which provide advanced courses of instruction for two years for pupils who have completed the primary course, are classed as *Superior Schools*. These were reorganised in 1912, and divided into Superior Commercial Schools, Superior Junior Technical Schools, and Superior Domestic Schools for Girls. At the beginning of 1913 there were twenty-six schools in the Commercial group, four in the Junior Technical, and ten in the Domestic group, with an enrolment of 78,457, and average attendance of 58,964. Provision has also been made for the more advanced education of children in country centres by the establishment of twenty-seven District Schools. These schools are specially staffed, and undertake the work of preparing students for admission to the training colleges. There are also twelve *High Schools* in the State. These had an enrolment in 1912 of 1772 boys and 1230 girls, with an average attendance of 1425 boys and 962 girls. In connection with the development of secondary education in New South Wales, a liberal scheme of scholarships has been provided, 300 bursaries and 514 scholarships having been allotted as a result of the examination for the qualifying certificate. Fifty intermediate scholarships and twenty-four University bursaries were awarded, together with twenty-two technical scholarships, and three scholarships at the Hawkesbury Agricultural College were granted to pupils of the Hurlstone Agricultural High School.

The Sydney Grammar School (not a "State" School in the ordinary acceptation of the term), which receives a State endowment of £1500 a year, had, in 1912, a quarterly enrolment of 561 pupils, and an average attendance of 522.

(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 decentralization of the system of secondary education. Eighteen Higher Elementary Schools are established, while the number of District High Schools was increased to nineteen. With the exception of the Melbourne High School the whole of the institutions are in country centres. The enrolment at the Higher Elementary Schools in 1912 was 1190, of whom 548 were girls, and at the District High Schools 2384, of whom 1138 were girls.

Scholarships granted by the Department are as follows:—(a) Forty ordinary, tenable for four years at a District High School or approved Secondary non-State School; (b) Forty agricultural, mining, and veterinary, tenable for four years at a High School or Secondary School, with a view to proceeding to a diploma at the University; (c) Forty junior teacher course, tenable for two years, enabling holder to obtain free tuition at a State High School in the course prescribed for junior teachers. Various scholarships are also granted by the councils of State Agricultural High Schools. There are also twenty ordinary and twenty agricultural, mining, and veterinary exhibitions open for competition.

(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. In smaller centres it is intended to provide secondary tuition at existing State Schools where the attendance warrants it, and this has been arranged for at Herberton, Childers, and Gatton. The enrolment at High Schools in 1912 was 754, and the daily attendance 566. 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 district scholarships, as well as £12 12s. per annum on account of each open scholarship owner in attendance. These scholarships, fifty in number, are granted to State School pupils. In order to conserve the interests of children of poor parents, it is proposed to make the scholarships available at any State High School, Technical School, Grammar School, or approved Secondary School, and to grant allowances up to £30 per annum to students who must live away from home, and £12 to those who live at home. The enrolment at the Grammar Schools in 1912 was 1280, and the average attendance 1141. Since the year 1909 these schools have been regularly examined by the Inspector-General of the Education Department.

(iv.) *South Australia*. Including the Adelaide High School, there were altogether nineteen District High Schools open in South Australia in 1912, with an enrolment of 2775 students, and a teaching staff of 78. 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 *bond 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 a High School, 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, and are open to pupils of any High School under State control. (iv.) Twelve Government bursaries, of which six are reserved for pupils of the Adelaide High School. These are tenable at the University, and the holder receives £20 per annum and free tuition.

(v.) *Western Australia.* A Modern School, designed to give a four years' course to pupils admitted at about the age of 13 years, was opened in Perth early in 1911. The first two years of the course are to a large extent common to all, but in the final two years specialization is aimed at, in order to meet the needs of future University students, teachers, agriculturists, scientific and business men; and, in the case of girls, to give tuition in domestic economy to those desirous of it. At the end of 1911 there were 337 students, but when the additional buildings are completed there will be accommodation for 400. No fees are charged at the Modern School. During 1909 the upper classes of schools in the largest centres of population were brought together into central schools, in order to secure more economical and effective teaching, and it is intended that these central institutions shall form the nucleus of future High Schools. Continuation classes were inaugurated in 14 centres in 1911, and were attended in 1912 by about 1200 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. Exhibitions and scholarships at present in force comprise three University exhibitions valued at £150 each, tenable for three years at any registered University in the British Empire, seven senior exhibitions valued at £25 each tenable for one year, and 12 junior exhibitions, valued at £15 each, also tenable for one year.

(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, with an enrolment of 150 and 110 pupils respectively. These will cater for five classes of pupils—(i.) Those who desire to become teachers; (ii.) University students; (iii.) Commercial; (iv.) Mechanics; (v.) Home duties (girls). It is proposed to grant a leaving certificate at the end of a four years' course.

7. Agricultural Training in State Schools.—The question of agricultural training in ordinary schools has received considerable attention in *New South Wales*. In 1905 a teacher of school agriculture was appointed to visit schools and districts for the purpose of giving instruction to teachers and scholars in the subject, the officer selected possessing the dual qualifications of a thorough acquaintance with agricultural work and school methods. The Education Department makes grants of seeds of various kinds to the 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. Schools of this nature were held in 1912 at Nowra, Camden, and Tamworth, the total attendances for the year being 1528 boys, and 109 masters.

The subject of Agricultural Colleges and Experimental Farms is dealt with in the section relating to Agriculture. (See page 356.)

In *Victoria*, what are termed Agricultural High Schools have been established at Ballarat, Colac, Leongatha, Mansfield, Mildura, Sale, Shepparton, Wangaratta, Warra-gul, 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. 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 now taught in about 700 State Schools. A Horticultural Society has recently been established in connection with State Schools, and has now 650 schools in affiliation.

Although *Queensland* possesses an Agricultural College and several experimental farms, there is no agricultural institution directly connected with the Education Department. The Government, however, provides a small grant to encourage the study of agriculture, horticulture, and kindred subjects in the State Schools, while a departmental teacher of agriculture visits the schools and gives assistance in agricultural, horticultural, and nature study work. 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.

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.

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.

8. **Teachers in State Schools.**—The distribution of the teaching staff in the State Schools during the year 1912, including teachers of needlework, was as follows:—

TEACHING STAFF IN STATE SCHOOLS, 1912.

(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	2,334	689	1,106	2,325	..	..	105	3,440	3,119	6,559
Victoria ...	1,557	801	349	1,165	363	1,302	437	2,239	3,705	6,004
Queensland ...	744	522	305	757	288	375	...	1,337	1,655	2,992
South Australia ...	322	426	100	434	41	150	111	463	1,121	1,584
Western Australia ...	297	228	108	440	19	97	64	424	829	1,253
Tasmania ...	183	216	31	152	55	203	1	269	572	841
Northern Territory	1	2	...	...	...	...	1	1	3	4
Commonwealth	5,468	2,884	1,999	5,273	766	2,128	719	8,233	11,004	19,237

It will be observed that there is a fairly large number of junior teachers, or pupil teachers, as they are called in most of the States. The pupil teachers will, however, in

time disappear, and their places will be filled by young people who have undergone a course of training in schools specially provided for the purpose. Allusion to the methods of training will be found in the next paragraph.

9. 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 1912, the total number of students in the Blackfriars Training College was 327, women students numbering 222. 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 1912 by 230 students. At the various district schools there were, during 1912, 168 first-year and 204 second-year probationary students, and of these 221 passed the entrance examination for the Training College. 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 recently sent to Italy in order to gain first-hand knowledge of the possibilities of the scheme. The Principal of the Training College is also Professor of Education at the Sydney University.

(ii.) *Victoria.* Candidate teachers in this State are trained in the District High Schools or Agricultural High Schools, the period of probation being supplemented by a course of training for two years in the Senior Training College at Melbourne. There are twenty District High Schools now in operation, of which ten give training in elementary agriculture. The present Training College dates back to 1874, but during the retrenchment period, viz., from 1893 to 1900, it was closed. The institution was reopened in February, 1900, with an enrolment of fifty-seven students. By the 30th June, 1912, the number had increased to 111. The College lectures are also attended by considerable numbers of private students qualifying for certificates as Infant, Kindergarten or Primary teachers. A Training College Hostel has been established and a Correspondence class formed for country teachers desirous of qualifying for the Infant Teachers' Certificate. The students at the Hostel receive training in domestic economy. Five city and four country practising schools are attached to the Training College. The University Practising School, with an enrolment of 180 in 1912, gives teaching practice for secondary students taking the diploma course at the Melbourne University.

(iii.) *Queensland.* There is no Training College in Queensland at the present time, but it is hoped ere long to establish one at Brisbane in affiliation with the University of Queensland. Section 6 of the University Act provides for the creation of a Training College, but the erection of the necessary building has been deferred owing to lack of funds. In the meantime, 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 will be 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. Young people of both sexes are admitted to the service as pupil-teachers at the age of fourteen years, the only training received being that given by the principals of the schools to which they are appointed. The schools for infants at Kangaroo Point and Rockhampton have, however, been specially staffed and equipped for training Kindergarten teachers, and Kindergarten methods have been introduced into most of the larger schools.

(iv.) *South Australia.* During the year 1910 the system of training in force in South Australia was remodelled and improved. Prior to this 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. There were 44 students in the Training College in 1912. At the Adelaide High School there were 97 students training for teachers at the end of 1912. 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. Twenty-six candidates passed the prescribed test for admission as pupil teachers.

(v.) *Western Australia.* A Training College for teachers was opened at Claremont in 1902. The original building provided accommodation for sixty students, but extensions were opened in 1908, and the number in training during 1912 was 116, of whom 50 were teachers of small schools undergoing a special course. The course in the Training College lasts two years. Central classes for "monitors" (*i.e.*, pupil teachers) were established at Perth in 1903, and monitors outside the metropolitan area are instructed by correspondence. A Normal School was established in Perth in 1907 for the purposes of providing a two years' course of higher instruction for a limited number of children who had completed the State School course and intended to become teachers. The pupils in attendance during 1910 numbered 59, of whom 33 were girls. In February, 1911, the Normal School was closed and replaced by a better equipped institution known as the Modern School. To assist teachers of small schools to gain some experience of the best method of school management, a Model School has been established at Gosnell's, and arrangements have been made for intending teachers, as well as those actually in charge of small schools, to spend a portion of their time at this institution. Special courses of instruction have been instituted to provide training for applicant teachers for small country schools, this plan being adopted to meet the growing demand for teachers in newly settled areas. Moreover, the schools of instruction for teachers in charge of the smaller country schools are held in different centres by district inspectors, as well as in Perth; an advisory teacher visits the schools in outlying districts, while camps of instruction are held to give practice in cadet training.

(vi.) *Tasmania.* In this State the scheme for training teachers has recently been remodelled with a view to increased efficiency, and the new provisions will come into operation in 1914. Prior to entering the Training College, students will be required to attend a High School for four years. After obtaining the leaving certificate, the candidates will be drafted to selected schools to serve as junior teachers for a year, in order to gain such knowledge as will enable them to more fully appreciate the professional training at the college in the following year. Trainees will attend at the University for instruction in the higher branches of certain subjects, and in some cases will be given a second and third year to enable them to qualify for Arts or Science degrees. During the year 1912 there were 105 students in attendance at the Training College. A Summer School for teachers was held in Hobart during 1912. It is intended shortly to establish model country schools as adjuncts to the practising schools.

10. **School Savings Banks.** — Returns shew that these institutions are in existence in three States. In New South Wales, there were 719 banks at the end of 1912, the deposits amounting to £30,221, and withdrawals to £29,911. Since the establishment of the banks in 1887, deposits totalled £435,983, and withdrawals £423,864. Of the latter

sum £102,478 was placed to the children's accounts in Savings Banks. In South Australia, 245 schools had 10,216 depositors, with £8682 to their credit; and in Western Australia, there were 237 school banks, with 12,743 depositors and £14,694 to their credit.

11. **Expenditure on State Schools.**—The net expenditure on State education during 1901 and for the five years ended 1912 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 1908-12.

(COMMONWEALTH.)

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	C'wealth.
	£	£	£	£	£	£	£	£
1901 ...	623,734	656,907	256,245	152,006	89,694	37,710	...	1,816,296
1908 ...	934,603	692,410	299,227	152,950	164,456	60,407	...	2,304,053
1909 ...	940,534	726,020	309,704	164,863	166,103	73,532	...	2,380,756
1910 ...	979,775	788,246	323,372	177,827	172,470	74,907	...	2,516,597
1911 ...	1,048,584	834,276	351,942	198,979	187,301	84,317	629	2,706,028
1912 ...	1,285,410	893,649	393,543	217,874	220,780	86,500	674	3,098,430

The expenditure per head of average attendance for each of the years given above will be found in the succeeding table. As the figures shew, Western Australia has the highest average, followed by New South Wales and Victoria, the lowest rate being in Tasmania. The increase in the number of small schools was chiefly responsible for the growth of expenditure in the Western State in 1912, the expenditure on primary education alone shewing an increase of £23,000 as compared with the preceding year.

COST PER HEAD OF AVERAGE ATTENDANCE, STATE SCHOOLS, 1901 and 1908-12.

(COMMONWEALTH.)

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	C'wth.
	£ 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
1908	5 19 9	4 16 6	4 8 11	4 0 1	6 10 10	3 15 9	...	5 3 3
1909	5 17 6	4 19 5	4 8 0	4 6 2	6 4 6	4 4 7	...	5 3 11
1910	6 4 5	5 8 0	4 13 2	4 4 9	6 5 8	4 3 4	...	5 10 5
1911	6 10 5	5 13 11	5 0 5	5 12 10	6 7 2	4 13 0	10 9 7	5 16 8
1912	7 10 4	5 12 1	5 1 9	5 6 8	6 14 0	4 8 5	9 9 10	6 4 11

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

EXPENDITURE ON STATE SCHOOL BUILDINGS, 1901 and 1908-12.

(COMMONWEALTH.)

Year.	N.S.W.	Victoria.	Qld.	S. Aust.	W. Aust.	Tasmania	Northern Territory.	C'wealth.
	£	£	£	£	£	£	£	£
1901 ...	57,663	36,040	33,421	13,656	49,073	7,762	...	197,615
1908 ...	146,715	106,983	44,333	22,726	34,299	8,659	...	363,715
1909 ...	149,767	162,932	57,349	31,512	31,099	8,442	...	441,101
1910 ...	191,188	118,556	50,668	44,025	47,637	16,957	...	469,031
1911 ...	176,194	117,048	53,953	35,581	58,406	16,548	...	457,730
1912 ...	287,522	167,657	67,637	40,855	73,920	9,423	2,117	649,131

The total net cost and the net cost per scholar in average attendance during the year 1912 were as follows:—

NET TOTAL COST, STATE SCHOOL EDUCATION, 1912.

(COMMONWEALTH.)

Item.	N.S.W.	Vic.	Q'land.	S. Aust.	W. A.	Tas.	N. T.	C'wealth.
Net cost of education, including buildings	£ 1,572,932	£ 1,061,306	£ 461,180	£ 258,729	£ 294,700	£ 95,923	£ 2,791	£ 3,747,561
Per scholar in average attendance	£9 3/11	£6 13/2	£5 19/2	£6 6/8	£8 18/10	£4 18/1	£39 6/2	£7 11/0

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

§ 3. Private Schools.*

1. **School Teachers, etc., in 1912.**—The following table shews the number of Private Schools, together with the teachers engaged therein, and the enrolment and average attendance in 1912:—

PRIVATE SCHOOLS, 1912.

(COMMONWEALTH.)

State.	Schools.	Teachers.	Enrolment.	Average Attendance.
New South Wales	754	3,673	61,744	51,168
Victoria	548	1,856	56,085	45,000
Queensland	151	767	17,289	14,752
South Australia	174	681	12,031	9,430
Western Australia	118	427	10,000	8,506
Tasmania	116	360	6,933	5,041
Northern Territory	1	2	53	43
Commonwealth	1,862	7,766	164,085	133,940

The totals for New South Wales include returns from the Sydney Grammar School, which receives a yearly State subsidy of £1500, and which, in 1912, had an enrolment of 561, and an average attendance of 522.

The figures for Victoria are furnished by the Inspector of Registered Schools, and unfortunately refer to primary schools only. It is stated that the decrease is due to the closing of a number of the smaller and inefficient schools. Some of the secondary schools in the country towns have also closed, and their pupils and a portion of the teaching staff have been absorbed by the State Higher Elementary or District Schools.

The figures for Queensland include the returns from Grammar Schools, of which there are ten—six for boys and four for girls. These schools are governed by boards of trustees, partly nominated by Government, and partly by the subscribers to the funds. The trustees make regulations regarding the fees of scholars, the salaries of teachers, and generally for the management of the schools. Each school is endowed by the Government at the rate of £750 per annum, together with an additional £250 to provide district scholarships, of which five were allotted to each school from 1st January, 1911. During the year all the grammar schools were inspected 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 1907 to 1912 are as follows:—

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

ENROLMENT AND ATTENDANCE AT PRIVATE SCHOOLS, 1891 to 1912.

(COMMONWEALTH.)

Year	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891 ...	124,485	99,588	1909 ...	164,428	127,069
1901 ...	148,659	120,742	1910 ...	158,694	129,872
1907 ...	152,037	122,878	1911 ...	160,794	132,588
1908 ...	152,399	125,530	1912 ...	164,085	133,940

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

3. Defects in Returns of Private Schools.—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, 55 non-State Schools were inspected by the Departmental Inspector. It is pointed out by the inspector that the schools obtaining registration under this Act will gain an advantage over non-registered schools which will tend to increase their yearly capital value.

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, nevertheless many teachers neglect to return the forms sent out. Provision has been made for registration of private teachers and schools very much on the lines adopted in Victoria. The Act declares that all persons who were employed in a *bonâ fide* manner for at least three months before 25th October, 1906, are entitled to be registered as teachers without submitting proof of professional qualifications. No person can be registered as a private teacher since July, 1907, unless the Board is satisfied as to his fitness for the work.

§ 4. Free Kindergartens.

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

FREE KINDERGARTENS IN THE COMMONWEALTH, 1912.

State.	No. of Schools.	Teachers.	Average Attendance of Children.	Number of Teachers in Training.
New South Wales (Sydney) ...	8	35	450	42
(Newcastle) ...	3	4	120	4
Victoria (Melbourne) ...	17	219	678	38
(Ballarat) ...	1	12	26	...
Queensland (Brisbane) ...	4	4	98	6
South Australia (Adelaide) ...	5	6	300	18
Tasmania (Hobart) ...	1	4	35	3
(Launceston) ...	1	4	45	3
Total ...	40	288	1,752	114

The figures given in the column referring to teachers include in some instances voluntary helpers and student teachers as well as permanent instructors. In New South Wales the total includes twenty-five student teachers, while the Victorian returns are inclusive of one hundred and eighty-five voluntary helpers.

It must, of course, be distinctly understood that the information given above refers to Kindergartens under private management, and is exclusive of institutions controlled by the Education 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 twenty-four candidates passed the required test, and the formal inauguration ceremony took place on the 11th October of the same year. A Royal Charter was granted to the University on the 27th February, 1858. Women students were admitted in 1881. 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 is provided that in view of their distinguished services, the present Chancellor, Sir Normand MacLaurin, and the Vice-Chancellor, Judge Backhouse, shall 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. For the year 1912-13 the statutory endowment to the University has been increased from £10,000 to £20,000. At the inception of the University there were only three professorships. The present staff consists of twenty-one professors, eight assistant professors, and ninety-four lecturers and demonstrators. There are, in addition, seven honorary lecturers, various honorary demonstrators, as well as various 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 eighteen professors, sixty-four lecturers and demonstrators, as well as fifty-seven miscellaneous assistants. The Conservatorium of Music has a staff numbering twenty-five.

(iii.) *University of Adelaide.* This University was established by Act of Parliament in 1874. Its origin and progress was largely due to the munificence of the late Sir Walter Watson Hughes and Sir Thomas Elder, G.C.M.G., the total gifts of the latter amounting to 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, thirty lecturers and six assistant lecturers, exclusive of the staff at the Conservatorium, which numbers ten.

(iv.) *University of Tasmania.* The Act to establish the University of Tasmania (Hobart) was assented to on the 5th of December, 1889. At the present time, the institution, which is small but efficient, possesses a staff of four professors, four lecturers, and

two assistant lecturers and demonstrators. Under Statute dated 13th April, 1905, the Zeehan School of Mines and Metallurgy was affiliated to the University.

(v.) *University of Queensland.* The Act to establish the University of Queensland was passed in 1909, and the first Senate was appointed on the 14th April, 1910. The University was opened on the 14th March, 1911, when 60 students were matriculated. Provision has been made for a Correspondence Study department in connection with the institution. At the present time there are four professors, *i.e.*, one each of classics, chemistry, engineering, and for mathematics and physics, with a liberal complement of lecturers and demonstrators.

(vi.) *University of Western Australia.* The University Commission in this State has recommended the establishment of a University somewhat on the lines of those in the eastern States, but with such amendments as would bring it as far as possible into accord with the most modern requirements. The Act establishing a University was passed on the 18th February, 1911. In addition to lectureships, the institution has been opened with six professorships—modern literature and history, mathematics and physics, chemistry, engineering and mining, and geology—while a chair in agriculture has been endowed by the generosity of Dr. Hackett. 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 1912:—

UNIVERSITIES.—TEACHERS AND STUDENTS, 1912.

University.	Professors.	Lecturers.	Students attending Lectures.		
			Matriculated.	Non-matriculated.	Total.
Sydney	29	101	1,107	388	1,495
Melbourne	18	64	...	...	1,221*
Adelaide	11	36	387	310	697†
Tasmania (Hobart) ...	4	6	79	51	130
Queensland (Brisbane)‡	4	17	205	14	219

* Exclusive of 98 music students. † Exclusive of 318 music students. ‡ Opened in 1911.

3. **University Revenues.**—The income of the Universities from all sources during the year 1912 was as follows:—

UNIVERSITIES.—REVENUE, 1912.

University.	Government Grants.	Fees.	Other.	Total.
	£	£	£	£
Sydney	43,000	20,590	26,850	90,440
Melbourne	37,404	31,793	7,532	76,729
Adelaide	27,004	10,296	6,445	43,745
Tasmania (Hobart) ...	5,000	1,454	732	7,186
Queensland (Brisbane)	12,500	2,331	3,888	18,719

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 Dixson ...	7,050	Robert Dixson ...	10,837	Other donations ...	14,902
Hon. Sir W. Macleay	6,000	John Dixson Wy-			
Mrs. Hovell ...	6,000	selaskie ...	8,400		
Thos. Walker ...	6,200	David Kay ...	5,764		
Other donations ...	53,714	Henry Dwight ...	5,000		
		Wm. Thos. Mollison	5,000		
		Other donations ...	44,862		
Total	£ 467,714	Total	£ 174,627	Total	153,812

In addition to the sum of £6000 shown above, the Hon. Sir W. Macleay also presented the Museum of Natural History to the University.

The credit balances of some of the above endowments now amount to very considerable sums. For example, on the 31st December, 1912, the Challis Fund amounted to nearly £310,000, and the Fisher bequest to over £41,000. The cash balance at the end of 1912 on account of all private foundations to Sydney University stood at £547,165. In the case of Melbourne University the Stewart fund on the 31st December, 1911, stood at £30,438, the Hastie at £19,238, the Dixson fund at £12,212, etc.

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. Private benefactions to the University of Tasmania and the newly-established University of Queensland amount to £3105 and £6846 respectively.

4. University Extension.—These 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 arranged for courses of lectures in Queensland, Victoria, and Western Australia. In 1912 the average attendance at extension lectures in New South Wales was 120.

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 numbering about 570 in 1911.

The Adelaide University has also instituted short courses of extension lectures in Arts and Science, to which students are admitted on payment of a nominal fee. Public intimation of these lectures is made from time to time during the session. For 1912 a course of nine lectures was provided. The University of Tasmania provides for courses of lectures at Launceston, which are delivered weekly by members of the University teaching staff.

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.

(v.) *Workmen's Tutorial Classes.* Chiefly as the result of a visit to Australia in 1913 by Mr. Mansbridge, 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. In New South Wales a Workers' Educational Association has been formed, and already tutorial classes have been started in Economics. The University Council in Victoria has formulated a scheme, and it is proposed to ask for a State grant of £2500, of which £1250 is to be expended on tutorial classes. In Queensland, classes have been formed at Brisbane and Ipswich, and the movement is extending in the other States.

§ 6. Technical Education.

1. **General.**—Although provision has been made in some of the States in respect to many necessary branches of technical education, the total provision made would imply that this branch of education has not been regarded as of great importance. As will be seen later on, the expenditure on technical education for the whole of Australasia is comparatively insignificant. The question of apprenticeship is dealt with 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 have also been erected in some of the chief country towns—at Maitland in 1890; Newcastle 1896; Bathurst 1898; Broken Hill 1898; Albury 1899; and Goulburn 1902. In other centres classes have been established in various subjects whenever the prospects are sufficiently encouraging. It is proposed to secure a greater degree of co-ordination of the Technical College with the other branches of State educational effort, and also with the technical side of the University. 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. It is stated that at present there is much wasted effort on account of the insufficient prior elementary training possessed by students taking up courses, and it is hoped that serviceable initial training will be provided in the newly established Trade and Continuation Schools. Provision has been made for Intermediate Technical Scholarships, entitling the holder to three years' free tuition at any of the organised day courses at the Technical College. These were eagerly competed for in 1912, and 10 with grant and 12 without grant were awarded.

The table below gives some idea of the development of technical education in New South Wales :—

TECHNICAL EDUCATION, NEW SOUTH WALES, 1908-12.

Year.	Number of Classes.	Number of Enrolments.	Average Weekly Attendance.	Number of Lecturers and Teachers.	Fees Received.
1908	790	18,490	10,498	280	£ 14,176
1909	864	21,242	12,265	292	15,475
1910	886	22,822	13,255	334	15,873
1911	875	23,621	15,074	329	16,395
1912	793	28,082	17,749	320	15,846

The enrolments in 1912 were distributed as follows :—

Sydney College Classes	...	...	...	17,359
Suburban Classes	...	...	...	2,599
Country Classes	...	...	...	6,511
				<hr/>
				26,469
Classes at Public Schools	...	...	...	1,613
				<hr/>
Total	...	...	...	28,082

Technical Day Schools have been established at the Central College in Sydney, and at Newcastle and Goulburn. The course of instruction covers two years, and is designed to prepare young students for admission to the Engineering, Mining, or Architecture classes at the College. Trade schools have been established at Balmain and Leichhardt. As mentioned elsewhere, higher technical training is afforded at the Schools of Mines and Engineering in connection with the University. References to the Agricultural Colleges will be found in the section dealing with Agriculture.

3. **Victoria.**—Technical instruction in mining has for many years received considerable attention in Victoria, the Ballarat School of Mines, which was established as far back as 1870, having achieved an Australasian reputation. The general scheme of instruction, however, lacked cohesion, and it was not until after the publication of the Report of the Royal Commission on Technical Education, which was appointed in 1899, that many defects were remedied. Prior to the passing of the Education Act of 1910, the Technical Schools were managed by local Councils, receiving grants from the Education Department. It is now proposed to place them directly under the control of the Department, and some of the smaller institutions have been transferred already, while the larger schools will be taken over as soon as the necessary arrangements can be made. 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. At present there are 20 Technical Schools receiving State aid, and of these 3 afford instruction in Science, Art, and Trade subjects; 3 in Art and Science; 3 in Art and Trade; while 5 confine their teaching to Art, and 1 to Trade subjects. 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 are open to receive State School exhibitioners. Science and Art classes have been established at some of the larger State Schools.

TECHNICAL EDUCATION, VICTORIA, 1912.

Year.					No. of Subjects Taught.	No. of Enrolments.	Fees Received.
							£
1908	...	...	...	...	68	6,012	10,883
1909	...	...	...	...	85	6,612	13,234
1910	...	...	...	...	88	7,107	13,631
1911	...	...	...	...	90	7,008	12,991
1912	...	...	...	...	101	7,923	11,664

The average attendance for Victoria is not available, but the number of individual students enrolled per term was given as 4440 for 1912.

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 1912 there were 16 colleges in operation—Bowen, Bundaberg, Cairns, Central, Charters Towers, Gympie, Herberton, Ipswich, Mackay, Maryborough, Mount Morgan, Rockhampton, Sandgate, Toowoomba, Townsville, Warwick. The colleges at Warwick, Brisbane and Mackay are under the direct control of the Department, while the remainder are managed by Committees under departmental supervision. The progress of technical education since 1908 is shown in the following table:—

TECHNICAL EDUCATION, QUEENSLAND, 1908-12.

Year.			Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
							£
1908	...	...	327	5,187	2,640	199	9,029
1909	...	...	349	5,608	3,128	214	8,605
1910	...	...	312	5,744	3,250	195	8,884
1911	...	...	381	7,089	5,567	219	10,349
1912	...	...	363	7,851	5,589	238	9,794

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. The Department now pays about £2000 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 14 years, coupled with the establishment of High Schools, will result in a more effective co-ordination between ordinary and technical education in the State.

5. **South Australia.**—A considerable amount of attention has been given to technical education in South Australia, particularly in connection with the mining industry. The School of Mines and Industries in Adelaide was founded in 1889. There are in addition Schools of Mines at Moonta, Port Pirie, Kapunda, and Gawler. A School of Design, Painting, and Technical Arts has been established in Adelaide, with branches at Port Adelaide and Gawler. The conditions connected with the country Technical Schools, viewed from the standpoint of the Department of Education, are not considered satisfactory. While the Government bears the bulk of the cost of maintenance, the Minister for Education is not consulted in regard to the organisation, curriculum, or staffing of the schools. Although good work has been accomplished, the system of

control of Technical Schools by independent councils is declared by the Director of Education to be no longer suitable, and stress is laid on the necessity for co-ordinating technical effort under one central authority. The development since 1908 is shewn in the table hereunder:—

TECHNICAL EDUCATION, SOUTH AUSTRALIA, 1908-12.

Year.			Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
1908	...	...	126	2,508	*	90	£ 3,370
1909	...	...	204	4,179	*	88	3,574
1910	...	...	199	4,646	*	83	3,537
1911	...	...	185	4,456	*	91	3,547
1912	...	...	201	4,760	3,445	95	3,526

* Not available.

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. There are branch institutions at Midland Junction, Fremantle, Claremont, Coolgardie, Kalgoorlie, Boulder, Murchison, Northam, Albany, Bunbury, Geraldton, Pingelly, Leonora, and Collfe, while it is proposed to open classes at other centres as occasion demands. 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. At the Perth School the full course can now be taken for the B.Sc. degree of the University of Adelaide. It is hoped that in this way a nucleus will be formed for an efficient staff of Science teachers for the Education Department and the State University. Returns for the last five years are embodied in the table hereunder:—

TECHNICAL EDUCATION, WESTERN AUSTRALIA, 1908-12.

Year.			No. of Classes.	Enrolments.	No. of Teachers.	Fees Received.
1908	...	...	135	1,337	73	£ 2,836
1909	...	...	146	1,574	83	2,854
1910	...	...	142	2,007	122	3,683
1911	...	...	230	4,595	157	3,332
1912	...	...	304	5,090	163	3,144

Information regarding average weekly attendance is not available for Western Australia.

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 three other schools under the control of the Education Department, each managed by a committee appointed by the Governor-in-Council. Tasmanian Technical Schools naturally devote their chief attention to mining and mineralogy. Statistics for the last five years are given as follows:—

TECHNICAL EDUCATION, TASMANIA, 1908-12.

Year.	No. of Classes.	Enrolments.	Average weekly Attendance.	No of Teachers.	Fees Received.
1908 ...	29	680	171	29	£ 619
1909 ...	67	794	248	32	647
1910 ...	49	614	267	33	681
1911 ...	54	838	295*	32	667
1912 ...	62	993	300*	36	768

* Estimated.

8. Attendance at Commonwealth Technical Schools.—The table hereunder shows the enrolment and attendance at Technical Schools and classes in the Commonwealth during 1912:—

ENROLMENT AND ATTENDANCE AT TECHNICAL SCHOOLS, 1912.

(COMMONWEALTH.)

State	Enrolment	Average Attendance	Technical Classes at State Schools.	
			Enrolment	Av. Attend.
New South Wales ...	28,082	17,749	1,613	545
Victoria ...	7,923	†3,500	79	...
Queensland ...	7,851	5,589	...	†1,597
South Australia ...	4,760	3,445	262	...
Western Australia ...	5,090	*	...	...
Tasmania ...	993	300	...	...

* Not available.

† Estimate.

‡ Free—Pupils from State Schools.

9. Expenditure on Technical Education.—The expenditure on technical education in each State during the period 1908 to 1912 is shown below:—

EXPENDITURE ON TECHNICAL EDUCATION, 1908-12.

(COMMONWEALTH.)

Year.	N.S.W.	Victoria.	Queensland.	South Aust.	West. Aust.	Tasmania.	C'wealth.
	£	£	£	£	£	£	£
1908 ...	51,814	26,839	10,720	7,856	9,264	2,215	108,708
1909 ...	61,452	27,039	13,589	12,742	9,422	3,209	127,453
1910 ...	71,002	32,217	20,612	13,476	9,987	3,055	150,349
1911 ...	77,160	41,030	34,611	13,017	14,590	3,726	184,134
1912 ...	99,265	42,541	44,073	13,906	27,536	3,318	230,639

The figures in the preceding table represent an expenditure of about 11d. per head of the population of the Commonwealth, as compared with 13s. 4d. per head spent on maintenance for primary education, and clearly show that technical education has not attained its proper place in the educational organisation of Australia. Expenditure on buildings, included in the foregoing totals, comprises £10,393 in New South Wales, £13,605 in Victoria; £18,697 in Queensland, and £12,144 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 those States where the information is available are given in the table hereunder:—

BUSINESS COLLEGES AND SHORTHAND SCHOOLS, Etc., 1912.

State.	Schools.	Teachers.	Students Enrolled.		Aver. Attendances.		Fees Recd. £
			Males.	Females.	Males.	Females.	
New South Wales ...	18	103	3,280	5,281	1,321	2,134	22,743
Victoria* ...	...	...	...	...	...	...	...
Queensland†	...	...	...	...	...	...	...
South Australia ...	4	38	911	746	453	369	8,488
Western Australia ...	4	25	363	594	229	343	3,619
Tasmania ...	3	9	77	159	23	52	862

* Not available. † Included in Private Schools.

The figures for average attendance shew a predominance of woman students in all States, except South Australia, the excess being due to the increasing number of girls finding employment as stenographers, and in clerical and accountancy work.

§ 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. a	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
Vic. ...	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'nsland	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. A. (b)	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. Aus.	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
Tas. ...	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
North'rn T'rt'y (c)	Read & write	...	...	...	...	...	2,397
	Read only...	...	...	...	...	...	34
	Cannot read	...	...	...	...	...	879
Federal T'rt'y (d)	Read & write	...	...	...	...	...	1,424
	Read only	...	...	...	...	...	14
	Cannot read	...	...	...	...	...	276
C'mw'lth	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

(a) Including Federal Territory prior to 1911.
(c) Included in South Australia prior to 1911.

(b) Including Northern Territory prior to 1911.
(d) Included in New South Wales prior to 1911.

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

**PROPORTION OF EDUCATION 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. (a)	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	18,227	8,633
S. A. (b)	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. Aus.	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
Tas. ...	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
N. T. (c)	Read & write	...	...	...	...	...	195
	Read only...	...	...	...	...	...	...
	Cannot read	...	...	...	...	...	118
Federal Ter. (d)	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

(a) Including Federal Territory prior to 1911. (b) Including Northern Territory prior to 1911. (c) Included in South Australia prior to 1911. (d) 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 will be more readily seen by reducing the foregoing figures to the basis of proportion per 10,000, and the results so obtained are embodied in the following table, a glance at which is sufficient to demonstrate the remarkable strides that at least the lower branches of education have made since 1861. In that year, only 47 per cent. of the children of school age could read and write, while 26 per cent. were illiterate. The returns for 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. (a)	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
Que'n'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. Aus. (b)	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. Aus. ...	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
Tasmania	Read & write	6,160	6,160	6,160	6,704	7,620	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 Territ'y (c)	Read & write	...	...	...	...	...	6,230
Federal Territ'y (d)	Read only...	...	...	...	...	...	3,770
	Cannot read	...	...	...	...	...	9,868
Com'w'lth	Read & write	...	...	...	...	...	5
	Read only...	...	...	...	...	...	127
	Cannot read	...	...	...	...	...	...
Com'w'lth	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

(a), (b), (c), (d), see notes to preceding table.

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

ILLITERACY AS SHEWN BY MARRIAGE SIGNATURES, 1861 to 1912.
(COMMONWEALTH.)

Year.	Proportion Signing with Marks of Total Persons Married.						
	Males.	Females.	Total.	Year.	Males.	Females.	Total.
	per cent.	per cent.	per cent.		per cent.	per cent.	per cent.
1861	18.50	30.69	24.60	1907	0.81	0.70	0.76
1871	10.55	16.40	13.49	1908	0.71	0.73	0.72
1881	4.34	6.78	5.56	1909	0.65	0.62	0.64
1891	2.27	2.40	2.34	1910	0.56	0.59	0.58
1901	1.35	1.29	1.32	1911	0.56	0.54	0.55
1906	0.92	0.86	0.89	1912	0.43	0.45	0.44

The table shews that there has been a large diminution in illiteracy, and judging from the figures for the last few years the proportion bids fair to practically disappear. Up to 1891 there was a higher proportion of illiteracy amongst females, but from 1910 onwards, generally speaking, the opposite condition prevailed.

§ 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 the origin of the Royal Society of New South Wales dates as far back as 1821, when it was founded under the name of the Philosophical Society of Australasia, Sir Thomas Brisbane being its first president. Scientific work was fitfully carried on by means of a society whose name varied as the years rolled on. It was called the Australian Philosophical Society in 1850. In 1856 the old Australian Society merged into a resuscitated Philosophical Society of New South Wales, and its papers were published up to 1859 in the Sydney Magazine of Science and Art (2 vols. 1858-9). Its present title dates from 1866. Some of the papers of the old Philosophical Society were published in 1825 under the title of "Geographical Memoirs of New South Wales" (Barron Field), and contain much that is interesting in regard to the early history of Australia. One volume containing the Transactions of the Philosophical Society of New South Wales (1862-65) was published in 1866. The journal of the Society did not begin to bear a serial number, however (vol. 1), until the year 1867. "Transactions of the Royal Society of New South Wales" was issued in 1867, the title of the series being altered to "Journal" in 1876. Up to the end of 1912 forty-six volumes had been published. The exchange list comprises the names of 372 kindred societies. At the present time the library contains about 21,000 volumes and pamphlets, valued at over £7500. Income and expenditure for the year ended 31st March, 1913, were £1397 (Government grant £400) and £1740 respectively. The Society had on the same date 318 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 1912 fifty-six volumes of publications had been issued. The Society exchanges with 326 kindred bodies. The constitution of the society states that it was founded "for the promotion of art, literature, and science," but for many years past science has monopolised its energies. The library contains about 10,000 volumes. Income for the year 1912 amounted to £488, including Government grant £200, members' fees £221, other £67. The total expenditure was £432.

The inaugural meeting of the Royal Society of Queensland was held on the 8th January, 1884, under the presidency of the late Sir A. C. Gregory. The society was formed "for the furtherance of the natural and applied sciences, especially by means of

original research." Shortly after its formation it received an addition to its ranks by the amalgamation with it of the Queensland Philosophical Society, which was started at the time when Queensland became a separate colony. At latest date the members numbered 127; publications issued, 24 volumes; library, 3800 volumes; societies on exchange list, 145.

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 1912 the number of members was 91. The income for the year 1912 was £463, including £226 Government subsidy, and expenditure £339. Up to 1912 the society had issued thirty-six volumes of proceedings and six parts of memoirs, exclusive of several individual papers published in earlier years. The exchange list numbers about 253.

The Royal Society of Tasmania (the first Royal Society outside the United Kingdom) was founded by Sir Eardley Wilmot, Lieutenant-Governor of Van Diemen's Land, on the 14th October, 1843. 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 annual volumes of proceedings, possesses 170 members, 15 corresponding members, exchanges with 140 kindred bodies, and has a library containing 10,000 volumes in addition to manuscripts, etc. Income for the year 1913 was £215, of which £178 came from members' fees.

(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 £13,000, including Government aid to the amount of £4000. The library contains 4000 volumes, valued at £400. Up to date, thirteen volumes of proceedings have been issued. The exchange list numbers 250. 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 £6000. Up to date, thirty-seven volumes of proceedings have been issued. Exchanges number 188. This Society maintains three investigators engaged in research work (four for part of the year), and owes its development almost entirely to the benefactions of Sir William Macleay. The number of ordinary members at the end of 1912 was 168. Income for the year came to £1028, and expenditure to £976. The special revenue for research purposes only was £2045, and the expenditure £1491. The British Astronomical Association has a branch in Sydney, and in some of the States the British Medical Association has branches.

The principal scientific society in Western Australia is the Natural History and Science Society of Western Australia. This society has grown out of the Mueller Botanic Society, founded in July, 1897. The objects of the society are the study of natural history and pure science, promoted by periodical meetings and field excursions, the maintenance of a library, and the issue of reports of proceedings. It numbers at present 118 members, whose subscriptions form its main source of revenue. Government aid in the past has ranged from £7 to £75 per annum, the subsidy paid in 1912 being £25. Since its establishment the society has issued twenty journals of proceedings. Its publications are exchanged with 41 institutions at home and abroad.

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

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

METROPOLITAN PUBLIC LIBRARIES.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch	Country Lending Branch.	
Sydney	237,481	*	12,902	250,383
Melbourne	215,763	30,913	...	246,676
Brisbane	37,521	...	...	37,521
Adelaide	77,328	28,444	...	105,772
Perth	90,982	9,109	...	100,091
Hobart	19,000	...	...	19,000

* 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, 1912, the books numbered 25,000.

The Mitchell Library in Sydney consists of over 60,000 volumes and pamphlets, principally relating to Australasia, 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.

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

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

SUBSIDISED LIBRARIES AND BOOKS THEREIN.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.
Number of libraries	469	525	203	208	237	31	2
Estimated number of books ...	969,000	1,109,000	304,000	486,000	214,000	103,000	2,700

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 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 100,000 and 20,000 volumes respectively. There are also 2227 libraries, with an estimated total of 320,000 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 1912 was 222,000, and the average attendance on week-days 608, and on Sundays 1167. The expenditure for 1912 amounted to £11,836. A valuable library containing over 18,000 volumes

is attached to the Museum. Representative collections, illustrative of the natural wealth of the country, are to be found in the Agricultural and Forestry Museum, and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids in country schools. The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, and the Museum of Normal and Morbid Anatomy, connected with the University, and the National Herbarium and Botanical Museum at the Sydney Botanic Gardens, are also accessible to the public. There is a fine Technological Museum in Sydney, with branches in six country centres, the metropolitan institution containing over 109,000 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 1912 was about 215,000.

The National Museum at Melbourne, devoted to Natural History, Geology, and Ethnology, is located in the Public Library building. The expenditure for specimens, furniture, etc., in 1912 was £500, and salaries and wages £2431. The Industrial and Technological Museum, opened in 1870, contains upwards of 55,000 specimens. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. Well equipped museums of mining and geological specimens are established in connection with the Schools of Mines in the chief mining districts.

The Queensland Museum dates from the year 1871, but the present building was opened in January, 1901. Since its inauguration the Government has expended on the institution a sum of £77,407, of which buildings absorbed £18,117, purchases £24,096, and salaries £35,194. The number of visitors during the year was 77,538, of whom 30,370 visited the institution on Sundays. The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and 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 80,000 visitors in 1912.

The latest available returns shew that the Western Australian Museum contains altogether 53,000 specimens, of an estimated value of £66,000. The Museum is housed in the same building as the Art Gallery, and the visitors to the combined institutions during the year reached 54,000 on week days and 17,000 on Sundays. The expenditure totalled £3781, of which salaries absorbed £2204.

There are two museums in Tasmania—The Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston, both of which contain valuable collections of botanical and mineral products. The Tasmanian Museum received aid from the Government during last year to the extent of £500.

4. Art Galleries.—Information regarding the State collections of objects of art in the various capitals is in some cases very meagre, while the method of presentation does not admit of any detailed comparisons being made. The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. The contents, which are valued at £140,000, comprise 393 oil paintings, 381 water colours, 526 black and white, 160 statuary and bronzes, and 368 ceramics, works in metal and miscellaneous. During 1912 the average attendance on week days was 620, and on Sundays 2247. The expenditure in 1911 amounted to £5852.

The National Gallery at Melbourne at the end of 1912 contained 545 oil paintings, 3583 objects of statuary, bronzes and ceramics, and 13,926 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 £291,000. At the end of 1912 the Ballarat Art Gallery contained 219 oil paintings, and 165 water colours, etc., while there are some valuable works of art in the smaller galleries at Bendigo, Geelong, and Warrnambool.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2000 in the purchase of pictures, which were exhibited in the Public Library building in 1882. The liberality of private citizens caused the Gallery to rapidly outgrow the accommodation provided for it in 1889, at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir T. Elder, the Government erected the present building, which was opened in April, 1900. The Gallery also received a bequest of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and of £3000 in 1907 from Mr. David Murray. At the latest available date there were in the Gallery 220 oil paintings, 131 water colours, 164 black and white, 142 engravings and etchings, 22 statuary, and 651 miscellaneous works in metal, etc., the whole being valued at upwards of £47,000. Building and site are valued at upwards of £31,000. Visitors during the year 1912 numbered 97,973.

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 97 oil paintings, 41 water colours, 217 engravings and black and white, 262 statuary, and miscellaneous metal works, etc., of a total value of £15,000.

In Tasmania the Art Gallery at Hobart was opened in 1887. Its present contents consist of 96 paintings and 81 etchings and black and white drawings. Buildings and site are valued at £30,000. The number of visitors during the year on week days totals 60,000.

The Art Gallery at Launceston was erected in 1888 at a cost of £5000, 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 £5000. The total value of buildings and site is estimated at £12,100. The annual attendance is 33,000, and for Sundays 16,000.

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, 1908-9 to 1912-13.

State or Territory.		1908-9.	1909-10.	1910-11.	1911-12.	1912-13.
		£	£	£	£	£
New South Wales	Total	£ 1,104,077	1,149,422	1,221,175	1,416,015	1,609,734
	Per head	13/9	13/11	14/11	16/11	18/6
Victoria ...	Total	£ 925,368	953,499	1,003,251	1,142,399	1,122,854
	Per head	14/5	14/7	15/8	16/9	16/7
Queensland ...	Total	£ 423,080	510,388	503,021	535,082	622,238
	Per head	14/11	17/4	17/-	17/2	19/8
South Australia...	Total	£ 238,376	231,584	275,671	298,610	323,787
	Per head	11/7	11/1	13/9	14/3	15/4
Western Australia	Total	£ 221,377	222,861	251,071	298,530	319,723
	Per head	16/4	16/-	18/6	20/3	21/3
Tasmania ...	Total	£ 81,182	87,603	92,036	95,352	101,008
	Per head	8/10	9/7	9/8	9/11	10/6
Northern Territ'y	Total	£ ...	...	...	1,477	2,516
	Per head	...	...	...	9/1	15/
Commonwealth	Total	£ 2,993,460	3,155,357	3,346,225	3,787,465	4,101,860
	Per head	13/10	14/3	15/4	16/7	17/8

* The comparatively heavy increase in Queensland for 1909-10 and subsequent years is due to the inclusion of expenditure in connection with the University.