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## CHAPTER IX.

## EDUCATION.

## § 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. 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 other Commonwealth States.* A more or less detailed account of the origin and development of the educational systems of the other States also appears in No. I. and No. II. issues of the Year Book. Later details are given hereunder.

(iii) *Medical Inspection of State School Children.* See Chapter XII., Public Hygiene.

2. Recent Development in State Educational Systems.—(i) *New South Wales.* In previous issues of the Year Book a brief account was given of the development of the New South Wales educational system since the year 1911. (See Year Book No. 17, p. 447.) Reference was made to the linking-up of the State School system with the University following on the passing of the University Amendment Act and Bursary Endowment Act of 1912; to the influence on attendance of the provisions of the amending Public Instruction Act of 1916; to the increased attention devoted in later years to school hygiene and to medical and dental inspection, and to the methods adopted of dealing with the problem of the backward or deficient child. Attention was also directed to the spread of agricultural teaching by the establishment of special agricultural schools, together with the special "rural schools" in country centres. (See also § 2, 4 (vi) hereinafter.) In recent years increasing attention has been given to vocational guidance training, and the Director of Education during a tour abroad in 1926 made special investigation into the matter. Under the charge of a superintendent, a vocational guidance bureau has been established, but so far has dealt with pupils seeking placement in the metropolitan area only. Future development will depend in large measure on the report of the Director. The bureau will be assisted in its work by advisory committees representative of various trades and occupations, and already quite a number of youths has found suitable placement through its agency. Reference to the types of pre-vocational schools in operation will be found in § 2, 4 (v a).

The Reports for the last few years draw attention to the disabilities under which the Education Department labours owing to shortage of teachers and lack of necessary funds for new buildings, equipment, and renovations. During the year 1925 the difficulty in regard to sufficiency of teachers was to some extent mitigated by the greater facilities available for the training of applicants, while the field of selection was widened by the receipt of applications for employment from teachers outside the State.

Excellent work is being done by the Parents' and Citizens' Associations which have replaced the old School Boards. The Report for the year 1927 again draws attention to the necessity for providing increased financial support in order to cope with the growing demand for educational facilities. It was pointed out that upwards of 38,000 children were being taught in weather sheds, corridors, and makeshift buildings, and that while during the last decade enrolment in secondary departments had practically trebled, the accommodation during the same period had barely doubled. The sum of £3,325,000 spread over a period of three years will be necessary to overtake arrears and to provide for the prospective growth in the school population.

(ii) *Victoria.* Some account of the development of educational activity in Victoria up to the close of the year 1922 was given in Year Book No. 17, p. 448. The principal task confronting the educational authorities during the last few years has been to overtake arrears in the way of providing sufficient new schools and remodelling existing unsatisfactory buildings, and this work has been energetically pursued since 1920. In 1924 increased attention was given by teachers and inspectors to the use of intelligence tests

as a means to secure more effective classification of pupils. A group test was worked out by the Training College and, in conjunction with examination tests, is proving of great value to teachers. Experiments in this direction are being steadily continued under the guidance of an expert. During the last few years several of the higher grade teachers from Victorian schools have taught in England and in Canada under the exchange system, and others were granted leave for travel and study chiefly in England and France. Considerable benefit has accrued, especially in the case of teachers of modern languages, of history and of geography. In some cases the teachers who have come to Victoria under the system have elected to remain in Australia at the end of their term of service. The "Teachers Act of 1925," in addition to making more effective provision for the staffing of schools, considerably increases the chances of promotion of all teachers, and, coupled with the "Superannuation Act of 1925" has had a stimulating influence on the service generally. Excellent work is being done by the various local committees, parents' guilds, fathers' guilds, and mothers' clubs formed in connexion with the schools, and it is estimated that more than 20,000 people are interesting themselves in this direction. A notable feature of recent years has been the success attending the establishment of the ten Schools of Domestic Art, and the demand for places greatly exceeds the available accommodation. Specially trained teachers of housewifery from these institutions have been attached to the "Better Farming" trains organized by the Department of Agriculture.

(iii) *Queensland.* A brief account was given in Year Book No. 17, p. 448, of the changes introduced into the educational system of Queensland by the Act of 1910. Reference was also made to the establishment of High Schools in 1912, of a Teachers' Training College in 1914, of rural schools in 1917, and other matters. Tuition by correspondence was initiated in 1922. In 1923 classes were formed at various centres for giving special instruction to backward, sub-normal, and defective children, and operations in connexion therewith were extended in later years. A Travelling Domestic Science School was initiated at Cunnamulla towards the end of the year 1925, a specially designed and equipped railway car having been constructed for this object. Apart from the rural schools and technical classes, special vocational classes were opened in several centres in 1923. Towards the close of this year the Gatton Agriculture College came under the control of the Education Department, and is now working as an Agricultural College and High School. In 1925 an additional Travelling Domestic Science School for girls was provided, and a Travelling Manual Training School for boys was established. Additional dental treatment was arranged for by means of a Travelling Dental Clinic. Twelve specially trained teachers have been appointed to take over the work of organization of physical exercises and sport. The improvement in the average quality of the teaching in recent years is due largely to the work of the Teachers' Training College and to the higher scholastic attainments possessed by candidates entering the service. Many of the teachers now in charge of small country schools have been trained at the College and have had practical experience in the larger schools.

(iv) *South Australia.* In Year Book No. 17, p. 449, attention was drawn to the modifications introduced into the educational system in 1921, in the way of a new course of instruction in the primary schools; the adoption of new methods of training, examination, and classification of teachers; and the revision of the system of inspection. During the year 1925 three types of Central School came into operation—Commercial Schools for Boys, Junior Technical Schools for Boys, and Home-making Schools for Girls. The object of these institutions is to provide education and training with a vocational bias for pupils from 13 to 16 years of age who intend to enter on commercial, industrial, or home-making pursuits. Several new schools were built during the year, and the work of remodelling the older schoolrooms to bring them into conformity with modern requirements was continued. The Medical Branch also was reorganized, its staff was increased, and a more comprehensive scheme of work was initiated. All children will now be medically examined at least twice during the primary school life.

The recent substitution of local School Committees, each of which functions for one school only in place of the Boards of Advice which looked after groups of schools, has been attended by very satisfactory results. Greater provision of helpful equipment for schools has ensued, libraries have been established or extended, and playgrounds improved, etc. Excellent work has also been done by the mothers' clubs established in connexion with the Infant Schools.

(v) *Western Australia.* A brief account was given in Official Year Book No. 17, pp. 449-50, of the changes and improvements introduced into the educational system of Western Australia during the years 1912 to 1921, but considerations of space preclude its repetition in the present issue. During recent years efforts are being made at a more systematic correlation of the work done in the various courses at the central schools with the practical needs in the life work of the scholars. To assist children in the outback districts the number of special rural schools, referred to later, is being increased as opportunity offers, while the system of teaching by correspondence has been greatly extended. Excellent work is being done by the Parents' and Citizens' Associations formed in connexion with the schools, and the federal association formed by these bodies disseminates useful information and suggestions. The spread of secondary education has resulted in a satisfactory increase in efficiency of candidates for the teaching profession, while good results have attended the arrangements for an interchange of teachers with the London County Council authorities.

(vi) *Tasmania.* Allusion was made in Year Book No. 17 (page 450) to the development on modern lines in recent years of the primary branch of the educational system of Tasmania, the establishment of secondary schools and of special infant schools, the extension of correspondence teaching, the provision of schools of method as an adjunct to a more efficient system of training teachers, and the means adopted for dealing with the problem of retardation. Limits of space preclude the repetition of this information in the present issue. In common with other States some difficulty has been experienced in securing suitable living accommodation for teachers in charge of outback schools, but it is hoped that this will in part be met by the scheme of consolidation of schools. Conveyance to Central schools was inaugurated in 1924, and it is proposed to extend this system as opportunity allows. In connexion with the problem of retardation, a Girls' Welfare School was established in 1924 at New Town, and represents the first attempt to deal with children from 14 to 16 years of age. Provision for elementary instruction in agriculture at primary schools in certain centres was also made in 1924. During the last few years considerable attention has been given in a number of schools to the subject of speech-training, and a special teacher deals with the subject at the Training College. For some years past the practice has been adopted of allowing inspectors to make periodical visits to the mainland States for the purpose of gaining additional experience.

(vii) *Northern Territory.* Although the number of children of school age in the Territory is small, nevertheless ample provision has been made by the Commonwealth Government for primary education. State schools are in operation at Darwin, Parap, Pine Creek, Alice Springs, and Emungalan. There is also a school for aboriginal and half-caste children at Kahlin Compound, Darwin. Children of scattered settlers are visited and instructed by an itinerant teacher, while families outback are receiving tuition by correspondence. In 1924, an inspector from the Queensland Education Department re-organized the educational system on the lines of that existing in Queensland, and the schools are now working in accordance with the Queensland curriculum. An inspection is made annually by an officer from the Queensland Department, and scholarships awarded may be taken out at approved secondary schools in Queensland. Of the 249 children on the rolls at the end of June, 1927, 78 were Chinese, 11 were quadroons, and 39 half-castes. At the Alice Springs school in Central Australia the white children attend from 8.30 a.m. to 1 p.m. and follow the usual course of instruction. Coloured children are taught from 3 to 4.30 p.m., and receive elementary teaching in reading, writing, arithmetic, and geography.

(viii) *Present position of State Education in Australia.*—Throughout Australia primary education is compulsory and free, while there exists in all States a more or less liberal provision of scholarships and bursaries to the Higher State Schools, to the Secondary Schools, and to the Universities. Provided that the requisite standard is reached, it is, of course, permissible for children to receive home tuition, or to attend so-called private schools. The orientation, lighting and ventilation of school buildings are being modernized, and in many cases both pupils as well as teachers are striving to render the class rooms bright and attractive and to give them an air of beauty and refinement. In all of the States periodical medical and dental inspection of the children is in force. (A detailed statement of the work being done in this direction will be found in the chapter dealing with Public Hygiene.) Methods of training teachers are now better developed,

and although the "pupil teacher" system with its effects has 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, 6, hereinafter.) There has been a wider employment of kindergarten and Montessori principles in the early stages, and the more or less purely abstract teaching of the older days has been largely replaced by concrete methods. Self-activity on the part of the pupils is being further cultivated by the partial adoption of the "Dalton" system or modifications thereof. Such subjects as nature study, manual training, music, drawing, business practice, and domestic economy have received a general impetus. Greater attention has been given to the scientific classification of pupils, and to the difficult problem of dealing with sub-normal or defective children. (In the Report of the Education Department of South Australia for the year 1923, the Medical Inspector asserts that a large proportion of juvenile delinquency is due to mental deficiency.) Staff meetings are now regularly held in connexion with most of the primary schools, and the lectures and discussions thereat have conducted in a marked degree to efficient working. In recent years sport has been more generally encouraged at the schools, and the pupils' interest and proficiency in the various games have been largely increased by the helpful participation of the teachers. Moreover, as will be seen from the above, and from § 2, 4, the State Education Departments are increasing their activities in the direction of secondary education. Lastly, the system of inspection has been considerably remodelled. Under the old system, the inspector was little more than an examining officer, but, under the present régime the primary duty of this officer consists in guiding and directing the teaching in accordance with approved methods. (See also § 6, Technical Education.) Excellent results have followed from the system of exchange of teachers with English teachers, not only as regards the sharing of professional ideas, but through the promotion of wider and sounder knowledge of the countries concerned.

(ix) *Co-ordination of Educational Activities.* As pointed out already, the educational system of New South Wales may now be considered as a more or less homogeneous entity, the various stages succeeding one another by logical gradation from kindergarten to university. In the other States development is proceeding on somewhat similar lines, activity in this respect being greatly helped by interstate conferences of directors of education and of inspectors and teachers. The sixth biennial conference of directors of education was held at Brisbane in May, 1926, and was attended by representatives of all the Australian States and of New Zealand.

## § 2. State Schools.

1. *General.*—The State Schools, or, as they are sometimes termed, the "public" schools, of Australia 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. Separate information regarding Technical Education is given in § 6, but the junior technical schools are included hereunder.

2. *Returns for Year 1927.*—(i) *General.* The following table shows the number of State Schools, together with the teachers employed and the enrolment and "average attendance" in each State during the year 1927:—

STATE SCHOOLS.—RETURNS, 1927.

State or Territory.	Schools.(a)	Teachers.(b)	Scholars Enrolled.	Average Attendance.	Percentage of Attendance on Enrolment.
New South Wales (c) ..	3,373	11,320	333,418	287,033	86.1
Victoria .. ..	2,726	9,035	250,833	199,586	79.6
Queensland .. ..	1,738	4,145	142,034	110,632	77.9
South Australia ..	1,012	3,202	86,513	73,178	84.6
Western Australia ..	852	1,995	56,252	50,183	89.2
Tasmania .. ..	500	1,282	31,978	27,862	87.1
Northern Territory ..	7	13	298	238	79.9
Australia .. ..	10,208	30,992	901,326	748,712	83.1

(a) Schools open during year. (b) Exclusive of sewing mistresses. (c) Including Federal Capital Territory.

(ii) *Schools in the Federal Capital Area.* During the year 1927 fifteen State Schools were in operation in the Federal Capital Territory (Yass—Canberra). The pupils enrolled numbered 1,073 and the average attendance 846. Cost of upkeep amounted to £9,602. By arrangement with the Federal Government these schools are conducted by the New South Wales Education Department on the same lines as the ordinary State Schools, the Department being recouped for expenditure. Ample provision has been made for both primary and secondary education, and this will be increased to meet requirements. The question of the establishment of a University at Canberra is at present under consideration.

**3. Growth of Enrolment and Attendance.**—The enrolment and average attendance at the State Schools in Australia are given below for the years 1891, 1901, 1911, and for each year of the period 1923 to 1927 :—

**STATE SCHOOLS.—ENROLMENT AND ATTENDANCE.—AUSTRALIA, 1891 TO 1927.**

Year.	Total Population. (a)	Enrolment.	Average Attendance.	Year.	Total Population. (a)	Enrolment.	Average Attendance.
1891 ..	3,421	561,153	350,773	1924 ..	5,874	861,256	705,990
1901 ..	3,825	638,478	450,246	1925 ..	5,992	872,473	720,975
1911 ..	4,573	638,850	463,799	1926 ..	6,111	883,925	730,571
1923 ..	5,750	848,882	685,233	1927 ..	6,235	901,326	748,712

(a) At 31st December, in thousands.

During the last five years the average attendance increased by 9 per cent., the figures ranging from 11 and 9 in New South Wales and Victoria respectively to about 3 per cent. in Western Australia.

**4. Distribution of Educational Facilities.**—(i) *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 :—(a) 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 : (b) 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 : (c) In still more sparsely-peopled districts, an itinerant teacher goes from house to house within a certain radius. Thus, in Queensland during 1927 the 9 itinerant teachers' districts covered 319,000 square miles of country, while a distance of 57,727 miles was travelled in visiting 1,139 children. Further, in New South Wales, Victoria, South Australia, Western Australia and Tasmania parents in the thinly-peopled areas are 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. In some cases the Department also provides the building. During 1927, subsidy to the amount of £26,395 was paid to 596 schools in New South Wales. Victoria had 3 schools of this type, Western Australia 16, and Tasmania 35 : (d) Several "travelling" schools have been established in New South Wales, the teacher being supplied with a van carrying a tent for himself and one for use as a school, together with books and apparatus for primary teaching. South Australia has devised attractive portable schools to meet the needs of new districts and temporary settlements. Queensland has three travelling housecraft schools for the instruction of girls, as well as adults, in the smaller centres, and in 1925 established a travelling manual training school for boys. Railway Camp Schools are established in some States on the sites of extensive railway works : (e) All the States provide also for education, by correspondence, of children in localities not at present reached by the methods outlined above, or for the purpose of supplementing the instruction given by the itinerant teachers. At the end of 1927 over 3,500 children were on the roll of the Correspondence School in New South Wales. Many children attending small one-teacher

schools receive super-primary instruction by correspondence, thereby obviating the necessity of having to travel to central schools. In Victoria 501 children were receiving elementary tuition by correspondence during 1927, and 451 others, in addition to 638 teachers, were receiving advanced lessons by the same means. As evidence of the success of the system, it is stated that in some cases where families have moved into a district where attendance at school is possible, the parents have asked for the correspondence lessons to be retained. In Queensland the net enrolment in the Correspondence Schools at the end of 1927 amounted to 3,737. In cases where parents can afford some assistance to the children it is considered that better results are obtained than by the itinerant teacher system. The benefits of the correspondence system have been extended to isolated children in Central Australia, in the Northern Territory, in the New Hebrides, and in New Guinea. In South Australia the Correspondence School at Adelaide had an enrolment in 1927 of 596. A library has been established in connexion with the school, and the books are much appreciated by both parents and children "outback." Early in 1925 the work of the school was extended to meet the needs of in-patients at the Children's Hospital, and 20 children were receiving lessons in 1927. In addition, 41 other children who have been certified as medically unfit to attend school were receiving lessons during the year. The teachers are assisted in this work by University graduates and others, who give their services voluntarily. The enrolment in correspondence classes in Western Australia of isolated children during 1927 was about 1,450. In addition, 1,256 children at small schools, and 87 who had left school, were taking correspondence lessons in special subjects. A fourth group consists of isolated children desirous of passing the junior examination, and a fifth of probationers and unclassified teachers preparing for a certificate, of whom 50 were receiving help. There are nine teachers attached to the Correspondence School in Hobart, and a visiting teacher tours the whole island, calling as far as possible, at all the isolated dwellings. The number on the roll in 1927 was about 270. In the Northern Territory during 1927 an itinerant teacher visited and instructed 12 children living on scattered holdings chiefly in the vicinity of the railway line.

(ii) *Centralization of Schools.* The question of centralization of schools adopted so successfully in America and Canada has received some attention in Australia, and particularly in New South Wales. It is recognized 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, and in 1927 a sum of £49,843 was expended in boarding allowance and conveyance to central schools. Cost of conveyance to State Schools in Victoria during 1927 was returned as £8,179. In South Australia the sum of £4,631 was disbursed in connexion with travelling expenses of school children in 1927, while £11,221 was spent in Western Australia, and about £3,600 in Tasmania. (It may be pointed out, however, that the parents are often reluctant to part with the small schools which form, as it were, "heart centres" in their little community, while the kindly help of the teachers is a great asset in the social and intellectual life of the districts served by the schools.)

(iii) *Education of Retarded and Defective Children.*—(a) *New South Wales.* A school for the deaf and dumb and the blind has been in operation for many years, and a scheme is under consideration for the provision of skilled teaching for the retarded and defective. A certain amount of scientific work in this connexion has been carried out at the Training College. In March, 1925, a contract was let for the erection at Glenfield of a special school for defectives, and the building was opened with practically a full complement of children of both sexes early in 1927. Two Committees, one composed of departmental officers, and the other of experts in mental problems will assist the Department in administering the scheme of training. The buildings have been planned to accommodate 128 resident pupils, and in 1927 about 120 children were under care. A State wide survey of mental defectives and cripples has been made, but the figures in connexion therewith are not yet available.

At the end of 1927 the pupils on the roll at the Institution for the Deaf, Dumb, and Blind numbered 164.

(b) *Victoria*. In this State there is a special school for the deaf and dumb, a school for the blind, a school for epileptics, two schools for the feeble-minded, and an open-air school for delicate children selected by the school medical officers from congested metropolitan areas. Backward children in the metropolitan area and in several provincial centres are drafted into tutorial classes, under specially-trained teachers, and it is proposed to establish a residential training home. At the open-air school specially prepared meals are provided for the children, and this feature, coupled with a suitable curriculum, has resulted in marked improvement in the health and physique of pupils.

Schools are also held at the Pentridge Gaol and the Castlemaine Reformatory.

(c) *Queensland*. Schools for the special instruction of backward and sub-normal or defective children have been in operation since 1923. The classes are held in Brisbane and the chief provincial towns. As it was found that parents disliked the idea of sending their children to "backward schools," the name was recently changed to "opportunity schools." The classes are divided into two grades—A and B—the former taking merely backward pupils of both sexes, and the latter boys of a low type of mentality. In 1927, there were in operation nine schools and these were attended by 343 pupils (including 124 girls) in the A class, while 37 boys were under instruction in the B class. Of the latter it was ascertained that in the majority of instances the low mentality was due to illness or physical defect, while in the former much of the backwardness was due to remediable causes, and 114 pupils were returned to their own schools in 1927. Of the boys in the B class, less than half were making any progress in ordinary school subjects. The history and progress of each child at these institutions are carefully recorded by means of a card system.

(d) *South Australia*. An expert psychologist has been appointed to examine and classify retarded and mentally defective children, train the special teachers required, and give instruction to students at the Training College. Opportunity classes were established in 1925, and up to the end of 1927 enrolments therein numbered 230, of whom 146 were dull and backward, 66 were educable feeble-minded, and 18 were uneducable, needing institutional care and treatment. The results so far obtained are regarded as satisfactory, but it is stated that there is need for legislation giving control over the feeble-minded throughout adolescence.

(e) *Western Australia*. In collaboration with the school medical officers, the teachers keep records of special or defective children and take steps to ensure attention and help in making improvement.

(f) *Tasmania*. Four classes, with six teachers are attached to the ordinary State schools in Hobart and Launceston, and are designed to meet the needs of children from 9 to 14 years of age. Teachers are also instructed in regard to suitable treatment for children who cannot attend the special classes. In addition, there are two special schools at Hobart for subnormal girls and boys respectively. These institutions are conducted on vocational lines, the instruction being in manual work for boys, and for girls principally domestic, and provision is made for helping the girls after they leave school. At the end of 1927 the total number of sub-normal children under tuition was 152.

(iv) *Evening Schools*. Evening Public Schools have been in existence for many years in some of the States, but their progress has been uncertain. In New South Wales the 57 Evening Continuation Schools had an effective enrolment of 4,451 and an average attendance of 3,418 in 1927. The schools for boys are classed as commercial, commercial preparatory, junior technical, and junior technical preparatory, and for girls as domestic and domestic preparatory. Attendances at the schools for boys numbered 2,905, and at those for girls 513. The comparatively high proportion of attendance to enrolment shows that the institutions are attractive. In Victoria there were 10 evening continuation classes in operation during 1927, the average attendance being 101. Although the Education Act of 1910 gives authority for the establishment of evening continuation classes at which the attendance of boys up to the age of seventeen years and living within a radius of 2 miles may be made compulsory for six hours a week, considerations of expense have prevented the free exercise of this power. 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. In Western Australia evening continuation classes were held at 21 centres in 1927, with an average enrolment of 2,695 pupils.



(v) *Higher State Schools.* (a) *New South Wales.* In New South Wales, public schools which provided advanced courses of instruction for two years for pupils who have completed the primary course were classed as Superior Schools. These were re-organized in 1913 as Day Continuation Schools, and divided into Superior Commercial Schools, Superior Junior Technical Schools, and Superior Domestic Schools for Girls. District Rural Schools were included in this group in the returns for 1927. During 1927 there were 126 schools of this type in operation, of which 20 were in the Commercial group, 31 in the Junior Technical, 60 in the Domestic, and 15 in the Rural School group, with an average attendance of 16,866 in the sixth and seventh classes. It is believed, however, that greater efficiency could be achieved by reducing the number of these schools and establishing Central "Superior Public Schools" instead. Provision has also been made for the more advanced education of children in country centres by the establishment of 15 District Schools. These schools, which in 1927 had an average attendance of 1,078, are specially staffed, and, in addition to the usual work, undertake the preparation of students for admission to the training colleges. In addition, there are 30 High Schools in the State. These had in 1927 an average attendance of 9,375. The growing demand for High School education in the metropolis and in country centres led to the establishment of Intermediate High Schools, and in 1927 the number had increased to 39, with an average attendance of 7,714. The Department publishes each year a statement showing the occupations taken up by High School pupils at the end of their school career. For the year 1927, out of 2,878 boys who left school, 830 became clerks, 399 were shop assistants, 345 entered on pastoral or agricultural work, 279 joined the Public Service, while of the balance, 294 became unskilled labourers. Although it does not follow that all those who joined the ranks of unskilled labour permanently remain there, nevertheless the proportion is regarded as too high.

The Sydney Grammar School (not a "State" School in the ordinary acceptation of the term), which receives a State endowment of £1,500 a year, had, in 1927, an enrolment of 629 pupils, and an average attendance of 553.

(b) *Victoria.* 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. Forty-seven Higher Elementary and 35 District High Schools have been established, and, to obviate congestion at the High Schools, Higher Elementary Classes are carried on at 35 "Central" Schools. The average attendance for 1927 at the Higher Elementary Schools was 3,696, of whom 1,788 were girls; at the District High Schools 8,142, of whom 4,067 were girls; while 2,082 boys and 2,053 girls were receiving secondary teaching in the Central Schools. The qualifications for admission to the High Schools and Higher Elementary Schools are that pupils shall be not less than 12 years of age, shall possess the qualifying certificate or its equivalent, and that their parents shall undertake that the children will remain at school for four years. For the first two years there is a common course for all pupils, followed thereafter by four special courses:— (1) A preparatory professional course for pupils preparing to proceed to the University, to enter the teaching profession, or to gain a sound general education; (2) an agricultural course to be taken in Agricultural High Schools; (3) a commercial course; and (4) a domestic arts course for girls. Parallel with these courses an industrial course has been developed for pupils who intend to enter upon some form of industrial occupation.

The demand for places in the metropolitan High Schools is in excess of the available accommodation, and although the "Central" Schools, already referred to, have to some extent relieved the congestion, increased provision is urgently needed.

In the Junior Technical Schools pupils are enrolled at 12 to 13 years of age for a course extending over three years designed to qualify for entrance to the Senior Technical Schools. There were 25 of these junior schools in operation at the end of 1927, with a net enrolment of 6,244 pupils.

Ten Schools of Domestic Arts have been established, and have met with such success that the accommodation is already overtaxed. At these institutions, in addition to continuing their general education, the girls receive special instruction in cookery, needlework, and various home duties. The attendance in 1927 numbered 2,418.

(c) *Queensland.* Allusion to the development of Secondary Education in this State was made in preceding issues of the Official Year Book (see No. 21, pp. 446-7).

In 1927 there were 21 High Schools in operation, 5 of which were called District High Schools (ordinary State schools with a higher "top"). The enrolment at these schools in 1927 was 2,371, and the daily attendance 1,947. There are, moreover, ten Grammar Schools—six for boys and four for girls—each of which is subsidized by the State. The total endowment paid to these schools in 1927 amounted to £16,800. The Government also pays *per capita* fees in payment for the tuition of State scholarship-holders in attendance at the Grammar Schools. During 1927 the payments for fees came to £16,048, while £14,950 was paid to "approved" secondary schools. The enrolment at the Grammar Schools in 1927 was 2,128 and the average attendance 1,729. Since the year 1909 these schools have been regularly examined by the inspectors of the Education Department.

(d) *South Australia.* Including the Adelaide High School, there were altogether 24 High Schools open in South Australia in 1927, with an enrolment of 4,223, an average attendance of 3,991, and a staff of 182 teachers. In addition to giving secondary education, these institutions form a valuable source from which the Department can draw a supply of young teachers.

In order to meet the needs of children who have gained the qualifying certificate but are unable to attend High Schools, 19 Higher Primary Schools are in operation. These had an enrolment in the higher primary branch in 1927 of 352. The 9 Central Schools provide an education with a vocational bias for pupils who will leave school at the ages of 13 to 16 years to enter upon industrial, commercial, or domestic pursuits, and in 1927 had an enrolment of 1,975.

(e) *Western Australia.* The enrolment at the seven High Schools in 1927 was 1,563 and the average attendance 1,500. In addition, the primary schools include a number of Central Schools in which the upper classes are collected from various contributory schools in the surrounding districts. These schools provide graduated professional, commercial, industrial, and domestic courses. Altogether 3,232 pupils were taking these courses, while 684 children in country towns were receiving instruction beyond the primary stage. Evening continuation classes were attended at 21 centres in 1927 by about 2,700 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. A scheme of carefully compiled correspondence lessons with the object of giving some measure of secondary education to suitable scholars in scattered country areas has also been arranged.

(f) *Tasmania.* The enrolment and average attendance at the High Schools in 1927 were 1,169 and 1,117 respectively. These provide for five classes of pupils—(i) Those who desire to become teachers; (ii) University students; (iii) Commercial; (iv) Mechanics; and (v) Home duties (girls). The full secondary course covers five years. At present the accommodation available is overtaxed, and a number of children who have reached the required standard is unable to gain admission.

(g) *Northern Territory.* Owing to the dwindling attendance, the High School class was abandoned in 1925, and a scholarship tenable at an approved secondary school in Queensland was substituted.

(h) *Scholarships and Bursaries.* As pointed out in § 1, 2 viii. *ante*, an excellent scheme of scholarships and bursaries to the higher State schools, and where required, to private secondary schools and to the Universities is in force in each State.

(vi) *Agricultural Training in State Schools.* (a) *New South Wales.* During 1921 the whole subject of agricultural education was revised, and, under a Supervisor of Agriculture, a definite course of scientific and practical instruction was evolved. This course is now being taken at the residential schools at Glenfield and Yanco, and it is proposed to establish similar schools in other parts of the State. The necessary number of teachers to initiate the work has been provided, and students will be trained at the University to meet future requirements. The enrolment at Glenfield (Hurlstone Agricultural School) in 1926 numbered 159, and at the end of the year 113 students were in residence at Yanco. Increased accommodation was provided in 1927 at both of these schools. Rural Schools, giving a course in elementary agriculture, nature study, and farm mechanics for boys, and domestic science and horticulture for girls were established in 1923. In 1927 the rural course was in operation in 15 country schools. The course extends over three years, and includes such subjects as elementary agriculture, applied

farm mechanics, and rural economics in the case of boys, while the girl pupils receive training in domestic science and horticulture. A model farm, varying in extent from 1 to 5 acres, is attached to each school. Average attendance at these schools in 1927 was 1,069.

(b) *Victoria.* In Victoria, Agricultural High Schools have been established in various country centres. Pupils must be at least fourteen years of age, and have passed beyond the curriculum of the elementary school, or else be able to afford satisfactory proof that they are qualified to profit by the instruction offered. The schools are practically secondary schools with an agricultural bias, and form a link between the rural school and the agricultural college. They are also used as a preliminary stage in the education of boys and girls who wish to become teachers and eventually graduate in the State Training College and the University. At some of the schools short courses in agriculture have been instituted for farmers' sons who have left school. A local council is appointed for each school, and exercises a general oversight over its operations. The experimental plots at these schools have aroused much interest among the farmers from the surrounding districts. A Supervisor of Agriculture reports and gives advice on the teaching of agriculture in the State Schools. A fair number of teachers has gained diplomas in agriculture, and is capable of giving practical instruction at the High Schools. Schools of Agriculture are conducted by the Agricultural Department at the State Research Farm, Werribee. Teachers in the wheat-growing districts are also instructed for short periods by the organizing Inspector of Agriculture at the University, and their services are utilized as leaders or group supervisors in their districts. The elementary principles of agriculture are taught in a large number of State Schools, and progress has been made in the direction of establishing agricultural clubs and home-project organizations. Experimental work at the Moriac School some years ago proved to the residents in the locality that onion-growing was a payable proposition. A Horticultural Society has been established, with 1,547 schools in affiliation, while practical help in school gardening is afforded by the departmental supervisor. The Society has a nursery and distributing centre for plants and seeds at Oakleigh, and sub-nurseries have been established at various schools. Children in remote districts receive tuition by correspondence. An officer has been detailed to promote the establishment of school plantations on blocks adjacent to school properties, the subsequent care of the trees, etc., to be undertaken by the pupils. Since the year 1923 plantations have been established at 190 schools, and the area planted amounts to 2,500 acres. The plantations are distributed amongst all types of schools, and in some cases have nurseries attached.

(c) *Queensland.* In Queensland the Government provides a small grant to encourage the study of agriculture, horticulture, and kindred subjects in the State Schools, while a departmental teacher of agriculture visits the schools and gives assistance in agricultural, horticultural, and nature study work. Excellent experimental work has been carried out at some of the schools, and gardens have been established wherever circumstances permitted. Cotton culture was undertaken by some hundreds of schools, in many cases with marked success, the product being harvested and sold at a satisfactory price. Several of the schools, with their surroundings of well-grown shade and ornamental trees, make attractive spots in the country landscape. In some cases forestry work has been taken up by schools, and, with the aid of the Forestry Department, it is proposed where feasible to plant school reserves with commercial timbers. Short courses of instruction for teachers have been instituted at the Gatton College. This institution was placed under the control of the Education Department in September, 1923, and was re-organized so as to include an Agricultural High School, which, in addition to ordinary secondary education, will provide graded courses in agriculture. Provision has also been made for non-resident students, and vacation courses have been arranged for State School teachers. The attendance in 1927 amounted to 231, and included 86 regular students, 23 short course, 94 farmers at the tractor school, and 28 pupils at the school for dairy factory employees. A large number of teachers has gained a practical knowledge of milk and cream testing and dairy farming methods generally, and the subject is now added to the programme of instruction in several of the dairying districts. The practical advice and help given has resulted in many instances in marked improvement in the dairy herds. Rural Schools have been established at 13 centres, and the establishment of 5 others in suitable localities is under consideration. In addition to the ordinary subjects of the

curriculum these schools provide for instruction in farming, fruit-growing, dairying, etc., with dressmaking, millinery and cookery for girls, and woodwork, leatherwork and tinsmithing for boys. Many of the pupils are expert milk-testers, and others are first-class fruit packers. Training in business methods, shorthand and typewriting is also available. Supplies of trees for distribution to other schools are raised at Nambour, and many schools distribute trees and plants for home planting. "Home project" schemes whereby subjects of practical agricultural interest are studied out of school hours have been established in connexion with a large number of schools. Weekly lectures on subjects of interest to farmers are given over the wireless by members of the College staff.

(d) *South Australia.* 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. A special instructor has been appointed to give assistance to teachers desirous of making their school gardens aid in nature study work. Assistance is given by personal visits as well as by correspondence, and by instruction at vacation Summer Schools. Teachers in training receive instruction in nature knowledge and the art of conducting nature studies. Elementary agriculture is taught in 155 schools, and 557 teachers have qualified as instructors in the subject. A seed wheat competition amongst school children inaugurated in 1911 has proved very successful. In 1919 two of the pupils who entered on the work of wheat-breeding produced wheat of such quality that they were unable to supply the orders for seed grain received from South Australia, as well as from other States. The competition has been regularly carried on since its inception. Milk-testing is carried out in several schools, and the various home projects schemes, and agricultural training generally, are greatly helped by the practical co-operation of the farmers. Agricultural clubs have been established in connexion with many of the schools. A Forest Camp School is held annually during the summer and autumn months in the Kuitpo forest, the scholars receiving practical training in forestry and allied subjects. With a view to fostering a local educational atmosphere, an interesting series of lectures was given by various experts during the winter months of 1927 at the Kadina High School.

(e) *Western Australia.* 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 show marked improvement each year. Special attention is being paid to the needs of the country schools, and as far as possible the instruction is given a practical bias. In some districts definite projects are undertaken of importance to a rural community, i.e., vegetable growing, bee-keeping, and pig and poultry keeping. The boys are also trained in useful manual work, and the girls, wherever possible, are taught simple cookery, and the drying and preserving of fruit and vegetables. Forty special rural schools have been established in different parts of the State, and the project system has as far as possible been made portion of the curriculum. A considerable amount of help is afforded to these schools by the Correspondence staff. Early in 1914 a school was opened on the Narrogin State Farm. The pupils are taken directly from the primary schools, and the course of instruction lasts for two years. On its completion students are qualified to enter on the diploma course at the University. The school was brought under the control of the Education Department in 1921, and has so justified its existence that it cannot accommodate all the applicants for admission. At the beginning of 1927 there were 71 students, of whom 60 remained for the latter part of the year. Provision has been made for practical work in agriculture at the High School at Northam, and, by arrangement, some of the pupils spend a portion of their time each year at the State Experimental Farm at Merredin. The Education Department is also interesting itself in finding employment on farms for town boys who have difficulty in obtaining employment at home.

(f) *Tasmania.* In Tasmania the organizing teacher of nature study visits and advises the teachers at the State Schools, and gives addresses and model lessons at the schools of instruction. During 1924 a beginning was made with the work of giving agricultural teaching at selected primary schools, and the results to date are regarded as distinctly encouraging. The subject of agriculture has been added to the list for the intermediate examination. Under an amendment to the Bursaries Act provision has been made for

agricultural bursaries, and the Agricultural Department gives two bursaries annually to boys passing the intermediate examination who have completed a course in agriculture and botany. These bursaries are tenable at the Hawkesbury College in New South Wales. Considerable success has attended the establishment of classes in Hobart for instruction in apple-grading and packing, and similar classes have been formed at several other centres.

5. Teachers.—The distribution of the teaching staff in the State Schools during the year 1927, including teachers of needlework, was as follows:—

## STATE SCHOOLS.—TEACHING STAFF, 1927.

State.	Principal Teachers.		Assistants.		Pupil or Junior Teachers.		Sewing Mis-tresses.	Total.		
	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Total.
New South Wales	2,428	1,059	2,371	5,462	..	..	230	4,799	6,751	11,550
Victoria	1,785	978	1,152	3,119	466	1,535	414	3,403	6,046	9,449
Queensland	1,046	645	666	1,444	143	201	..	1,855	2,290	4,145
South Australia	597	466	617	1,399	32	91	170	1,246	2,126	3,372
Western Australia	455	357	279	727	20	157	129	754	1,370	2,124
Tasmania	200	302	83	390	64	243	3	347	938	1,285
Northern Territory	4	4	1	3	..	1	..	5	8	13
Total	6,515	3,811	5,169	12,544	725	2,128	946	12,409	19,529	31,938

The figures for principal teachers include mistresses of departments, while students in training colleges have been grouped with assistants. Some of the teachers in sole charge of small schools have had very little training, but future permanent appointments will be confined as far as possible to those who have gone through a regular course of instruction.

It will be observed that there is a fairly large number of junior teachers, or pupil teachers, as they are called in some of the States. Although expert pedagogical opinion throughout the world is against the pupil-teacher system, motives of practical expediency compel its retention, or some modification thereof, in most countries. Allusion to the methods of training will be found in the next sub-section.

In New South Wales and in some of the other States attention has recently been drawn to the difficulty of securing an adequate supply of teachers, particularly male teachers for small schools in out-back districts. Difficulty is also experienced in some of the States in securing suitable living accommodation for teachers of these small schools.

6. 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.* At the end of 1927 the total number of students in training was 1,261 (488 men and 773 women), of whom 200 were taking the twelve months' course for rural teachers or assistants, and the balance the various courses up to five years, and the special courses arranged in accordance with departmental requirements. Practically all accessible metropolitan schools are used as practice schools for giving training-college students opportunity to acquire practical skill in teaching. Formerly the limits of accommodation at the College were responsible for the employment in the schools of a number of untrained juniors, but during recent years teachers entering the service have at least six months' professional training. The Principal of the College is also Professor of Education at the University. Coupled with its educational research the College issues a scientific educational periodical written almost exclusively by the staff, while members of the staff are from time to time afforded opportunities of visiting foreign countries on study leave. In addition to the help and advice afforded by the inspectorial staff, teachers in rural districts receive the advantage of tuition by lectures and correspondence from members of the Training College staff. The Department also arranges for schools of instruction in various subjects during vacations. In 1928 it is proposed to establish a branch Training College at Armidale, and, if successful, Colleges will be established in other country centres. This course will relieve congestion at the College in Sydney, reduce expenditure, and have the further advantage that teachers will be trained in an environment similar to that in which they will subsequently be employed.

(ii) *Victoria.* During recent years the educational and professional attainments of the general body of teachers in Victoria have greatly improved. Prior to the establishment of the High Schools, the pupil or junior teachers were recruited from the ranks of those who had obtained the Merit Certificate in the eighth grade of the elementary schools, and the acquirement of the necessary literary qualifications for promotion was greatly hindered by the circumstance that they were engaged in teaching for the greater portion of the day. Under present conditions, candidates spend at least two years in a High School, and consequently enter on their professional duties with a better mental and physical equipment. A number of High School pupils after serving as junior teachers for a year is awarded studentships at the Training College. 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 57 students. In addition to the metropolitan institution there are now branch Training Colleges at Ballarat and Bendigo. At the end of the year 1927 the students in training numbered 572. In addition to the correspondence courses and the Saturday and evening classes, classes are conducted for private kindergarten students, and for students of manual and domestic arts. Several practising schools are attached to the Training College, and infant rooms with attached kindergartens have been specially equipped for the training of infant teachers. The University High School gives secondary teaching practice to both departmental and private students. Five courses of training are provided for at the Melbourne College, i.e., for kindergarten or infant teachers, for primary teachers, for secondary teachers, for teachers of manual arts, and for teachers of domestic arts. The branch institutions at Ballarat and Bendigo will devote their attention chiefly to training teachers for work in the rural schools. Teachers are also greatly helped by district Conferences, and by special training at the Vacation Schools. Excellent results have been attained at the psychological laboratory attached to the Training College.

(iii) *Queensland.* The great majority of the teachers in Queensland originated in the pupil-teacher system, under which beginners, at the age of fourteen or thereabouts, were selected from the senior classes of the primary schools and placed in charge of classes, their efforts being to some extent supervised by the head teachers or senior assistants. In addition to the strain involved in teaching, the neophytes had to prepare notes of lessons, and to study for the annual examinations. During recent years, however, the juniors have been largely recruited from the secondary schools, and their more advanced physical and mental development renders them better fitted for their duties. Arrangements have been made to increase the number as early as possible, and in order to attract candidates of a suitable type, a number of senior and junior teacher-scholarships is offered annually, while provision has been made for training a number of student teachers at the larger State schools.

At the Training College, which was opened in 1914, the activities comprise—(a) training of teacher-scholarship holders; (b) short courses of training for unclassified teachers selected from small country schools; and (c) tutorial classes and correspondence tuition courses to assist students preparing for departmental examinations or for matriculation. During 1927 the number of students under training or tuition was 838, comprising 28 senior and 193 junior scholarship holders, 138 teachers at evening classes, 20 short course students, and 269 teachers receiving tuition by correspondence. In addition, 193 students, principally public servants, were receiving tuition at evening classes. Students at the College gain practical experience at the principal Practising School and at the Associated Practising Schools.

(iv) *South Australia.* In preceding Year Books a brief account was given of the scheme of training for teachers introduced in 1920. (See No. 17, p. 461.) During the year 1925 additional facilities were provided for instruction in domestic art, woodwork, and elementary agriculture. The total number of students in attendance at the Training College during the year 1927 was 432. Practical work in teaching is carried out at selected schools for the various types of teachers. Lectures on subnormality and delinquency in children were given for the first time in 1925. The disability under which the College has laboured for many years through having no premises of its own has been remedied by the erection of a specially-designed building. At the present time many of the teachers possess University degrees, and others are taking advantage of the specially designed evening lectures at the University.

(v) *Western Australia.* A Training College for teachers was opened at Claremont in 1902. The original building provided accommodation for 60 students, but extensions were opened in 1908 and the number in training in 1927 was 220, of whom 131 were taking the one year's course for teachers of small country schools. A fair proportion of the full-course students attends lectures at the University, and some remain for a third or fourth year to complete degree work. In addition to the ordinary schools at which teachers gain professional experience, special practising schools have been established for the proper training in teaching and managing the smaller country schools. The standard for entry into the teaching profession has been considerably raised during recent years. Formerly young people were taken at the age of fourteen years from the primary schools and appointed as "pupil" teachers. At present the probationary teachers or monitors must be seventeen years of age, and are expected to possess a good secondary education. After a short period of probation they enter the Training College for special professional training. University graduates receive a special course of one year's duration. Untrained applicants are appointed only when the supply of trained teachers is insufficient. The teachers in the metropolis are greatly helped by periodical conferences of inspectors and teachers, while in rural areas schools of instruction are conducted by inspectors at convenient centres. Teachers in isolated areas are assisted by visiting teachers in the organization of manual and agricultural work, and receive help also from the correspondence classes.

(vi) *Tasmania.* During 1917 the scheme for the training of teachers was recast and grouped in four divisions:—(1) A short course to supply the professional training required for the less important positions in the primary schools and for teachers of the smaller provisional and Sixth Class schools; (2) Training of infant teachers; (3) Training for positions in the larger primary schools; and (4) Training of high school teachers. Students in the higher grades attend courses at the University. Practical training for the various classes is given in well-equipped practising schools and in model small schools. The inspectors hold schools of instruction for teachers of small schools, and teachers of moderate attainments are also helped by the Correspondence School. The enrolment at the Training College in 1927 numbered 122.

7. *Expenditure.*—(i) *Maintenance—All Schools.* The net expenditure on maintenance in all grades of schools, excepting technical schools, and the cost per head of average attendance for the five years ended 1927 are shown below. The figures do not include expenditure on buildings, which is given separately in a subsequent table.

## STATE SCHOOLS.—EXPENDITURE ON MAINTENANCE, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
TOTAL.								
	£	£	£	£	£	£	£	£
1923	3,185,085	1,814,185	1,200,636	491,341	526,739	225,261	3,463	7,446,710
1924	3,296,669	1,859,809	1,264,005	538,744	543,395	240,787	4,015	7,747,424
1925	3,520,903	1,963,214	1,364,844	597,960	548,426	246,429	4,326	8,246,102
1926	3,626,447	2,132,519	1,406,853	710,499	556,748	251,307	4,443	8,688,816
1927	3,697,618	2,184,762	1,438,969	743,274	605,704	257,653	4,406	8,932,386

## PER HEAD OF AVERAGE ATTENDANCE.

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1923	12 7 1	9 17 9	11 9 1	7 7 4	10 17 0	8 12 0	18 18 6	10 17 4	
1924	12 5 6	9 16 10	11 16 7	7 16 8	11 5 0	8 19 0	19 6 1	10 19 6	
1925	12 18 3	10 1 3	12 9 0	8 12 4	11 3 5	8 19 0	20 10 0	11 8 9	
1926	13 3 3	10 16 6	12 12 10	9 17 10	11 4 6	9 0 3	18 19 9	11 17 10	
1927	12 17 8	10 18 11	13 0 1	10 3 2	12 1 5	9 4 11	18 10 2	11 18 7	

The combined growth in cost of maintenance during the last five years has been brought about by the higher salaries and allowances paid to teachers, and the increased expenditure in connexion with the supply of materials and equipment. Practically the whole of the increase in Western Australia for the year 1927 was due to the reclassification and new salary scales for teachers.

The figures for Queensland include expenditure in connexion with State scholarship holders at Grammar Schools and other approved secondary institutions, allowance being made for the number of these pupils in arriving at the cost per head of attendance.

(ii) *Maintenance—Secondary Schools.* The figures given in the preceding table refer to expenditure on maintenance of all State primary and secondary schools, exclusive of technical colleges. It has been thought desirable by the State Education Departments to give separate information in regard to the cost of secondary education. Any satisfactory estimate of this nature is, however, rendered difficult by the circumstance that there is no exactly comparable definition of the term "secondary" as applied in the various States, while difficulties arise in connexion with the correct apportionment amongst the various branches of expenses of administration, inspection, and the training of teachers. A further complication is caused by the fact that both elementary and higher education are in some instances given in the same school and by the same teacher. The figures quoted in regard to cost hereunder have been extracted from the Reports of the State Education Departments, and are subject to the qualifications above enumerated.

#### STATE SECONDARY SCHOOLS.—EXPENDITURE ON MAINTENANCE, 1927.

State.	Cost.	Cost Per Head of Population.	
		£	s. d.
New South Wales .. .. .	421,510	3	6
Victoria .. .. .	290,068	4	3
Queensland .. .. .	119,496	2	8
South Australia .. .. .	87,929	3	1
Western Australia .. .. .	116,020	6	0
Tasmania .. .. .	18,190	1	9

The figures in all cases are exclusive of cost of buildings. For Queensland, the figure quoted does not include the cost of the Agricultural High School and College, which amounted in 1927 to £30,276.

(iii) *Buildings.* Expenditure on school buildings in each of the years quoted was as follows:—

#### STATE SCHOOLS.—EXPENDITURE ON BUILDINGS, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
1923	628,592	481,372	93,760	85,024	55,173	12,751	..	1,356,672
1924	766,019	531,571	157,683	107,466	71,634	20,643	184	1,655,200
1925	621,109	459,303	126,392	138,132	63,373	43,248	823	1,452,380
1926	638,387	508,121	138,784	231,207	57,337	34,716	132	1,608,684
1927	668,413	578,691	98,905	156,520	53,506	21,751	..	1,577,786

The large increases in expenditure shown in most instances during the last four years were due to the efforts made to overtake arrears in necessary buildings and repairs.

(iv) *Total.* The net total cost during the year 1927 was as follows:—

#### STATE SCHOOLS.—NET TOTAL COST, 1927.

Item.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
Net cost of education, including buildings	4,366,031	2,763,453	1,537,374	899,794	659,210	279,404	4,406	10,510,172

The figures in this and the preceding tables refer to all grades of State schools (with the exception of technical schools), and include evening schools. Including buildings, the net cost per scholar in average attendance for the whole of the State schools in Australia amounted in 1927 to £14 0s. 9d., as compared with £4 9s. 3d. in 1901.



8. **School Savings Banks.**—In New South Wales the control of these institutions was taken over in 1924 by the Government Savings Bank, which allows interest on the children's deposits. In Victoria banks were in operation at 2,042 schools at the 30th June, 1928. On the same date the number of depositors amounted to 136,906 and balances at credit to £219,934. In South Australia, there were 52,446 depositors, with £79,233 to their credit; and in Western Australia, there were 683 school banks, with 49,352 depositors and £84,930 to their credit.

### § 3. Private Schools.\*

1. **Returns for 1927.**—The following table shows the number of private schools together with the teachers engaged therein, and the enrolment and average attendance in 1927:—

#### PRIVATE SCHOOLS, 1927.

State.	Schools.	Teachers.	Enrolment.	Average Attendance.
New South Wales .. .. .	713	4,558	102,883	71,821
Victoria .. .. .	484	2,253	65,026	(a)55,000
Queensland .. .. .	193	1,207	30,559	25,005
South Australia .. .. .	179	914	17,590	13,653
Western Australia .. .. .	123	540	12,002	10,865
Tasmania .. .. .	70	276	6,904	4,961
Northern Territory .. .. .	1	5	110	91
<b>Total .. .. .</b>	<b>1,763</b>	<b>9,753</b>	<b>235,074</b>	<b>181,396</b>

(a) Estimated.

The totals for New South Wales include returns from the Sydney Grammar School, which receives a yearly State subsidy of £1,500, and which, in 1927, had an enrolment of 629, and an average attendance of 553.

The figures for Queensland include the returns from Grammar Schools, of which there are ten—six for boys and four for girls, with an enrolment of 1,295 boys and 833 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. The total Government aid received in 1927 amounted to £16,800. In addition, a sum of £16,048 was received for Government scholarships and bursars' fees. The Grammar Schools are inspected annually by officers of the Department of Public Instruction.

2. **Growth of Private Schools.**—The enrolment and average attendance at private schools during 1891, 1901, 1911, and in each year of the period 1923 to 1927 are as follows:—

#### PRIVATE SCHOOLS.—ENROLMENT AND ATTENDANCE, 1891 TO 1927.

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891 .. .. .	124,485	99,588	1924 .. .. .	229,543	175,614
1901 .. .. .	148,659	120,742	1925 .. .. .	228,564	175,283
1911 .. .. .	160,794	132,588	1926 .. .. .	233,566	178,985
1923 .. .. .	206,910	169,466	1927 .. .. .	235,074	181,396

The increase in average attendance during the last five years amounted to about 7 per cent.

3. **Registration of Private Schools.**—Conditions in regard to the registration of private schools were alluded to in previous Year Books (*vide* No. 18, p. 451), but consideration of space precludes the repetition of this information in the present issue.

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

### § 4. Free Kindergartens.

The following information regarding Free Kindergartens has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia, the details for which were furnished by the Education Department.

#### FREE KINDERGARTENS, 1927.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
New South Wales (Sydney)	16	820	32	30	80
Victoria (Melbourne) ..	28	1,715	62	38	350
(Ballarat) ..	1	45	2	..	14
Queensland (Brisbane) ..	6	(a) 300	8	18	6
South Australia (Adelaide)	8	300	8	23	5
Western Australia (Perth)	6	243	12	20	4
Tasmania (Hobart) ..	4	107	6	4	..
(Launceston) ..	2	88	4	1	7
Total .. ..	71	3,618	134	134	466

(a) Estimate.

In New South Wales there were 65 students at the Kindergarten Training College. At the Melbourne College, 38 students were in training. The Brisbane Training College had 18 students in training, the Training College at Adelaide 30, and at Perth 20. Four students were in training at Hobart.

The information given above refers to institutions under private kindergarten unions or associations, and is exclusive of the kindergarten branches in the Government schools of the various States.

### § 5. Universities.

1. **Origin and Development.**—(i) *University of Sydney.* The Act of Incorporation of the University of Sydney received Royal Assent on the 1st October, 1850, and the first Senate was appointed on the 24th December of that year. The first matriculation examination was held in October, 1852, when 24 candidates passed the required test, and the formal inauguration ceremony took place on the 11th October of the same year. A Royal Charter was granted to the University on the 27th February, 1858. Women students were admitted in 1881. The passing of the University (Amendment) Act of 1912 marks an important epoch in the development of the educational system of New South Wales. The Act aims at placing the University in a more effective position as the culminating point in a thoroughly co-ordinated system of State education, and it is claimed that the passing of this measure made 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. More extended reference to this Act and to the liberal scheme of exhibitions provided thereunder for scholars from the State and Private Schools was given in Official Year Book No. 15, page 745. At the inception of the University there were only three professorships. The present staff consists of 34 professors, 10 associate, 4 assistant professors, 30 honorary lecturers, and 159 lecturers and demonstrators.

(ii) *University of Melbourne.* This institution was established by Act of Parliament assented to on the 22nd January, 1853, and its first council was appointed on the 11th April of that year. The foundation stone of the main building was laid on the 3rd July 1854, and the University was formally inaugurated on the 13th April, 1855. By Royal Letters Patent, issued in 1859, its degrees are, like those of the Sydney institution, declared of equal status with those of any other University in the British Empire. Women students were admitted to degree courses for the first time in 1880. The University, which began in 1855 with schools of Arts and Law, has now a staff of 23 professors, 5 associate professors, 139 lecturers and demonstrators, and 150 various assistants. The Conservatorium of Music has a staff numbering 50.

(iii) *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 connexion with the institution, and at the request of the Brisbane branch of the Workers' Educational Association weekly lectures are given in History and Economics. At the present time there are 14 professors, with 30 independent lecturers, 4 assistant lecturers and demonstrators, and 12 student demonstrators.

(iv) *University of Adelaide.* This University was established by Act of Parliament in 1874. Its origin and progress were largely due to the munificence of the late Sir Walter Watson Hughes and Sir Thomas Elder, G.C.M.G., the total gifts of the latter amounting to over £100,000. Additional benefactions are alluded to under "3. University Revenue" hereinafter. The academical work of the institution was commenced in March, 1876, when 8 matriculated and 52 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 recognized 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 19 professors, 105 lecturers and demonstrators, and 90 miscellaneous assistants, while the staff at the Conservatorium numbers 18.

(v) *University of Western Australia.* The University of Western Australia was established under an Act which received Royal assent on the 16th February, 1911, and the first Senate was appointed on the 13th February, 1912. The University was opened in March, 1913. There are now 10 professors, in addition to 18 lecturers and demonstrators and 30 miscellaneous assistants. Associates of the Perth Technical School or the Kalgoorlie School of Mines may, under prescribed conditions, obtain a reduction in period of attendance for the B.E. degree, and students from the School of Mines may be admitted to the examinations and take portion of their course at the University. Under the will of the first chancellor, Sir J. Winthrop Hackett, the University received a sum of £425,000, in addition to the endowment of the Chair of Agriculture. In 1927 the University received from the estate of Robert John Gladden property valued at £60,000. The bequest is subject to certain annuities and is to be allowed to accumulate for ten years.

(vi) *University of Tasmania.* The Act to establish the University of Tasmania (Hobart) was assented to on the 5th December, 1889. At the present time the institution, which is small but efficient, possesses a staff of 10 professors, 16 independent lecturers, and 3 assistant lecturers and demonstrators. Under Statutes the Zeehan School of Mines and Metallurgy and the School of Mines and Industries at Mount Lyell were affiliated to the University.

2. Teachers and Students.—The following table shows the number of professors and lecturers, and the students in attendance at each of the State Universities during the year 1927:—

## UNIVERSITIES.—TEACHERS AND STUDENTS, 1927.

University.	Professors.	Lecturers and Demonstrators.	Students attending Lectures.		
			Matriculated.	Non-matriculated.	Total.
Sydney .. .. .	48	189	..	..	2,410
Melbourne .. .. .	28	139	..	..	(a) 2,538
Queensland (Brisbane) .. .. .	14	34	448	84	532
Adelaide .. .. .	19	105	866	872	(b) 1,738
Western Australia (Perth) .. .. .	10	30	339	88	427
Tasmania (Hobart) .. .. .	10	19	172	42	214

(a) Exclusive of 245 music students.

(b) Exclusive of 605 music students.

Students at the Conservatorium of Music have been excluded in the case of Melbourne and Adelaide. The Conservatorium in Sydney, while attached to the Education Department, is not under the control of the University.

3. University Revenue.—The income of the Universities from all sources during the year 1927 was as shown in the table below. The figures in the column "private foundations" refer to income from investments, the cash value of benefactions received during the year being shown separately in the appended notes.

## UNIVERSITIES.—REVENUE, 1927.

University.	Government Grants.		Fees.	Private Foundations.	Other.	Total.
	Ordinary.	Special.				
	£	£	£	£	£	£
Sydney .. ..	32,000	(a)43,132	45,297	(b)84,624	3,260	208,313
Melbourne ..	(c)66,941	10,000	67,053	(h)85,076	49,018	278,088
Queensland (Brisbane)	23,562	5,000	10,416	(e)19,432	1,693	60,103
Adelaide .. ..	24,000	(f)24,190	28,710	(d)16,773	4,273	97,946
Western Australia (Perth) .. ..	21,500	..	2,190	879	3,565	(g)28,134
Tasmania (Hobart) ..	13,655	..	2,837	1,569	358	18,419
Total .. ..	181,658	82,322	156,503	208,353	62,167	691,003

(a) Includes special grant of £3,100 from Commonwealth and States Governments.  
 (b) Includes new foundations, £13,016. (c) Includes statutory endowment, £82,000, annual parliamentary appropriation, £3,350. (d) Includes interest, but excludes new endowments of £21,000 expended by Government on buildings. (e) Includes £396 new money. (f) Includes £700 Commonwealth vote for research. (g) Not including the Hackett bequest of £95,865.  
 (h) New foundations, receipts from existing benefactions included under other.

The extent to which the older-established Universities have benefited by private munificence will be apparent from the following table. (Reference to gifts and bequests to the smaller Universities will be found on the next page.) The amounts quoted represent actual cash received, special mention being made of individual gifts of £5,000 and over. In some instances the figures include annual gifts or annual income from donations, and are exclusive of bequests of books, scientific apparatus, &c., the cash value of which cannot be stated:—

## UNIVERSITIES.—BENEFACTIONS.

University of Sydney.		University of Melbourne.		University of Adelaide.	
Donor.	Amount.	Donor.	Amount.	Donor.	Amount.
	£		£		£
J. H. Challis ..	276,750	Sidney Myer ..	50,000	Sir Thos. Elder ..	98,760
Sir P. N. Russell ..	100,000	Sir Samuel Gillott ..	41,348	The Hon. Sir Lang-	
W. O. Watt ..	72,182	Sir Samuel Wilson ..	30,000	don Bonython ..	60,000
Thos. Fisher ..	30,000	James Stewart ..	25,624	Mrs. Jane Marks ..	30,000
Proprietors of "The Sydney Morning Herald" ..	10,000	R. B. Ritchie ..	22,185	R. Barr Smith and family ..	21,150
Miss Elizabeth Caird ..	9,576	Hon. Francis Ormond ..	20,000	T. E. Barr Smith ..	20,000
Sir Hugh Dixon ..	9,050	John Hastie ..	19,140	Sir W. Hughes ..	20,000
Edwin Dalton ..	8,000	David Aitchison and Miss E. C. Hickman ..	13,862	Family of John Darling ..	15,000
J. F. Archibald ..	6,224	Mrs. E. R. Moran ..	13,000	Mrs. G. A. Jury ..	12,000
Thos. Walker ..	6,200	Robert Dixson ..	10,837	Hon. J. H. Angas ..	10,000
Hon. Sir W. Macleay ..	6,000	John Dixon Wyse- laskie ..	8,400	Sir Josiah Symon ..	10,000
Mrs. Hovell ..	6,000	Sir J. M. and Lady Higgins ..	7,700	John Melrose ..	10,000
Mrs. M. H. Dalley ..	5,000	Edward Wilson ("Ar- gus" Trust) ..	11,656	Sir Joseph Verco ..	5,000
Miss E. S. Hebden ..	5,000	W. R. Pearson ..	7,800	Other donations ..	37,710
Other donations ..	77,879	R. J. Fletcher ..	7,500		
		Mr. and Mrs. F. Knight ..	6,000		
		David Kay ..	5,764		
		E. J. B. Nunn ..	5,300		
		Cuming Smith & Co. Ltd. ..	5,250		
		Subscribers, Ormond Exhibitions in Music ..	5,217		
		Henry T. Dwight ..	5,000		
		Wm. Thos. Mollison ..	5,000		
		E. Truby Williams ..	5,000		
		Other donations ..	132,425		
Total .. ..	627,861	Total .. ..	464,008	Total .. ..	349,620

The figures for the Sydney University are exclusive of the bequest by the late Hon. Sir Samuel McCaughey, M.L.C., of property producing an annual income of £19,000 (now £22,000) to be applied to the general purposes of the University.

The credit balances of some of the above endowments now amount to very considerable sums. For example, on the 31st December, 1927, the Challis Fund amounted to over £328,000, and the Fisher Fund to £40,200, while in the case of Melbourne University the Stewart Fund on the 31st December, 1927, stood at £31,000, the Dixson Fund at £17,426, and the Gillott fund at £41,000. The Myer Trust at the same date amounted to £54,000.

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 Queensland amounted in 1927 to £133,553, the main source of revenue being from a sum of £60,000 received from the trustees of the late Sir Samuel McCaughey and £20,000 from the Walter and Eliza Hall Trust. A gift of £10,000 was received from the British Red Cross Association in 1920, and a similar sum was presented in 1922 by Miss Kate Garrick.

With a view to advancing the cause of education in agriculture, forestry and allied subjects, Mr. Peter Waite transferred to the Adelaide University in 1914 the whole of the valuable Urrbrae estate at Glen Osmond. The estate comprises 134 acres of land with a fine mansion. In 1915, he presented the estate of Claremont and part of Netherby, comprising 165 acres, adjoining Urrbrae, while in 1918 he transferred to the University 5,880 shares in a public company to provide funds to enable the University to utilize the land for the purposes intended. The value of these bequests is not stated in the University returns. In 1922 Adelaide University benefited by a gift of property valued at £20,000, presented by Mrs. A. M. Simpson and Miss A. F. Keith Sheridan.

In Western Australia the Chair of Agriculture was founded by an endowment of Sir Winthrop Hackett, and the University also benefits to the extent of £425,000 under the terms of his will. Recently the University received an estate valued at £60,000 from the late Robert John Gladden.

Private benefactions to the University of Tasmania amount to about £7,000, this figure, however, including in some instances amounts received annually, and not including bequests of books, apparatus, etc., the value of which was not stated.

4. University Expenditure.—For the year 1927 the expenditure by the Universities under various headings was as follows:—

## UNIVERSITIES.—EXPENDITURE, 1927.

University.	Salaries and Administration.	Scholarships, Bursaries, etc.	General Maintenance.	Buildings and Grounds.	Other.	Total.
	£	£	£	£	£	£
Sydney .. ..	142,477	6,890	34,599	(a) 4,739	1,109	189,814
Melbourne .. ..	113,930	10,366	8,690	12,495	(b) 31,072	176,553
Queensland (Brisbane) .. ..	32,037	240	2,709	(f) 5,264	(e) 14,448	54,698
Adelaide .. ..	61,491	828	2,734	322	(c) 26,693	92,068
Western Australia (Perth) .. ..	23,726	3,403	4,500	4,080	(d) 9,679	45,388
Tasmania (Hobart) .. ..	12,488	1,402	2,370	739	(g) 1,421	18,420
Total .. ..	386,149	23,129	55,602	27,639	84,422	576,941

(a) Includes £943, new buildings. (b) Includes laboratory and research, £12,721. (c) Includes laboratory and research, £13,158. (d) Laboratory and research, £3,503. (e) Includes laboratory and research, £7,968. (f) Includes new buildings, £4,787. (g) Laboratory and research, £1,204.

5. **University Extension.**—Extension lectures were instituted at Sydney University in 1886, and in 1892 a Board was appointed which receives and considers applications from country centres, and makes provision for engaging lecturers and managing the entire business connected with the various courses. The Board also arranges for courses of lectures in other States. In 1927 provision was made for 12 courses, 7 of which were delivered in Sydney and suburbs, and 5 in country towns.

Evening tutorial classes open to both matriculated and unmatriculated students have been established in various centres in accordance with the University Amendment Act of 1912. Sixty-three of these classes, attended by nearly 2,000 students, were in operation during 1927.

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. A joint committee composed of 8 representatives of the University, 4 from the Workers' Educational Association, 2 from the Trades Hall Council, and 1 other appointed after consultation with the Board, controls the organization of tutorial classes. The Board also arranges for advising country students by correspondence on social and cultural subjects. The tutorial classes during the year numbered 28, of which 15 were held in Melbourne, 6 in the suburbs, and 7 in country towns, the combined attendance reaching 1,200. In addition over 200 students were receiving tuition by correspondence. A University Public Fortnight held at the end of June was attended by 800 members of the general public, and the Board is considering a proposal to make this feature of its work an annual one. Extension lectures were given in the city and in 17 country centres, and a wireless lecturette was broadcast each week during the year.

In Queensland the activities previously conducted separately by representatives of the University and of the Workers' Tutorial Classes were amalgamated in 1926 under a general committee for tutorial classes and public lectures. During the year 1927 six public lectures were delivered, and three intra-mural courses were arranged in Brisbane while there was a large enrolment in the correspondence classes. During the vacations in May and August lectures were given at several country centres.

The Adelaide University has 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. Three lectures were delivered in 1927. Enrolments at the thirteen tutorial classes and the various study circles, etc., in 1927 numbered approximately 1,000, of whom 800 were in the city.

In Western Australia provision has been made for the giving of courses of extension lectures in Perth and suburbs, also—by arrangement with local committees—in country centres. During the year 1927, nine lectures were given in Perth, and 46 in the country. The professor of agriculture visits the chief farming districts for the purpose of giving lectures to, and holding conferences with the primary producers. Special short courses for farmers are given at the University, and 53 broadcast lectures were given from the Westralian Farmers' station. Short courses of popular lectures are also given in the evening by various professors at the University, and a number of external students receive tuition by correspondence.

In Tasmania during 1919 the University Extension Board which had previously controlled the work of providing extra-mural tuition was replaced by the Committee for Tutorial Classes. The Professor of Economics is director of tutorial classes, and visits as many centres as possible during the year. Thirteen full classes with an enrolment of 492 students were held during 1927. Effective students (60 per cent. attendance) numbered 306.

6. **Workers' Educational Association.**—In 1913 Workers' Educational Associations were formed in all the States of Australia, and later in New Zealand. The movement has for its object the bringing of the University into closer relationship with the masses of the people, and thereby providing for the higher education of the workers in civic and cultural subjects. The work of the Association is gaining in popularity year by year and the growth of the movement has been phenomenal. The Government of New South Wales at first granted the University of Sydney the sum of £1,000 to initiate a scheme for tutorial classes. There are now direct grants from all State Governments except Western Australia, and an additional University grant in New Zealand. The particulars of grants for classes are as follow :—New South Wales, £5,970, 58 classes and 3 study

circles; Victoria, £4,250, 32 tutorial classes and extension work; Tasmania, £2,100, 11 full classes and 15 half or shorter courses; South Australia, £2,550, 24 classes and 10 study circles; Queensland, £3,000, 11 classes and 638 correspondence students. In addition, the New South Wales Association receives a Government grant for general organizing purposes of £500, paid on the basis of £1 for £1 on subscriptions and donations up to this amount. The Carnegie Corporation has recently shown their interest in the work by allotting grants of \$10,000 to New South Wales and to Victoria and \$5,000 to each of the other States. In every State with the exception of New South Wales the grant was given to the University for co-operative schemes of adult education, and has been used for the maintenance of tutorial classes and for extension work. In the case of New South Wales half of the grant was given to the Association for the purchase of books for its central lending library. An additional grant of \$5,000 was allotted to the Federal Council of the Association as the nucleus of an endowment fund for the Association's monthly journal "The Australian Highway." Correspondence courses form a strong feature of the work in Queensland, groups of construction workers and other outback pioneers being reached thereby. The total number of students throughout Australia is approximately 5,000, the greater number of whom are taking three-year courses while working at their daily occupations. An analysis of these occupations showed that the great majority of the students were wage-earners. The principal subjects chosen in all States are Industrial History, Economics, Political Science, and Sociology, but there is an increasing number of classes in other subjects such as History, Psychology, Philosophy, Literature, Music, Physiology, and Biology. Each University co-operates with the W.E.A. in the formation of a joint committee which appoints tutors and generally supervises the work with the assistance of a University officer with the title of Director of Tutorial Classes. In addition to the longer and more serious courses, a great many preparatory classes, study circles, and summer schools are organized by the Association, numerous courses of public lectures are delivered, educational conferences promoted, and an extensive book service is spreading educational literature throughout Australia. A strong feature of the work of the Association is the organization of a number of country branches to carry facilities for higher education to districts in which these have hitherto been lacking. This work has been particularly successful in New South Wales, Victoria, Queensland, and Tasmania. A Commonwealth Conference held at Adelaide in 1918 resulted in the formation of a federal organization now known as "The Workers' Educational Association of Australia." Its central office is in the Education Department Sydney. The Federal Council co-ordinates the activities of the W.E.A. in all States and has inaugurated a series of publications on sociological and economic subjects. Nine books have been published to date, including "Modern Economic History" by Professor H. Heaton; "Marx and Modern Thought," by G. V. Portus; "Shadows and Realities of Government," by F. A. Bland; "A New Province for Law and Order," by Mr. Justice Higgins; "A Life of Society," by Prof. J. B. Condliffe; "A Study in Social Economics: The Hunter River Valley," by F. R. E. Mauldon. The Federal Council also publishes "The Highway," a monthly magazine now in its ninth year, which contains notes on the movement, and general discussions on educational work.

## § 6. Technical Education.

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

2. **New South Wales.**—Some account of the origin and development of technical education in New South Wales was given in Official Year Book No. 15, page 750, but considerations of space preclude its repetition in this issue. It may be noted, however, that technical education had its origin in this State in 1883, but it was not until the year 1913 that a definitely co-ordinated scheme was adopted. The branch Technical Colleges

with the exception of those at Newcastle and Broken Hill, were then superseded by Trade Schools, admission to which was restricted to those actively engaged in the trade concerned, and was dependent also on the possession of a certain degree of preparatory knowledge. Courses of instruction in which workshop experience is not necessary to train the efficient worker—such as Art, Science, and Commercial Courses—are, however, open to all students who have the requisite preliminary knowledge. Advisory committees were appointed for each trade or group of trades and have proved very helpful. The first two or three years' course of instruction is given in the Trade Schools, and students may then go on for a further two or three years' advanced teaching at the Technical Colleges. The higher courses embrace instruction in advanced trades' work qualifying for the position of manager or foreman, but no attempt is made to train for the professional standing. It is hoped, however, that the scheme will develop so that part of the graduates may proceed to the University. Admission to the higher courses will eventually be restricted to those who have either graduated in the Trade Schools of the Department, or who evidence possession of a similar standard of knowledge. In addition to the courses given in the Technical Colleges and Trade Schools, elementary instruction has been provided at various centres where there has been a demand for it, and provision has been made also for special courses of instruction by correspondence. A liberal scheme of scholarships has been drawn up for students passing from the day or evening Junior Technical Schools or Domestic Science Schools, to the Trades and Science Schools, as well as scholarships to the University at the close of the diploma course.

The table below gives some idea of the development of technical education in New South Wales during the five years 1923 to 1927 :—

**TECHNICAL EDUCATION.—NEW SOUTH WALES, 1923 TO 1927.**

Year.	Number of Classes.	Number of Enrolments.	Individual Students.	Number of Lecturers and Teachers.	Fees Received.
1923	664	23,496	10,234	478	£ 14,042
1924	674	25,462	11,386	499	16,644
1925	679	26,796	11,787	519	17,882
1926	688	28,764	12,089	527	18,938
1927	743	30,399	13,238	552	20,882

The Superintendent of Technical Education stresses the need for greater financial provision to meet the growing demand for technical training, and points out the advantages that would accrue from the establishment of a system of daylight instruction.

3. **Victoria.**—Technical instruction in mining has for many years received considerable attention in Victoria, the Ballarat School of Mines, which was established as far back as 1870, having achieved an Australasian reputation. Fine work was also done at the School of Mines in Bendigo, and later on excellent courses of training were evolved at The Working Men's College in Melbourne. The general scheme of instruction, however, lacked cohesion, and it was not until after the publication of the Report of the Royal Commission on Technical Education, which was appointed in 1899, that many defects were remedied. Prior to 1910 the whole of the schools were under the control of local councils, but in the year mentioned the control passed to the Education Department. At the end of 1927 there were 27 Technical Schools receiving State aid. 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. During 1927 the classes in operation numbered 180, and the average enrolments per term amounted to 2,610. Such institutions as the Swinburne Technical College, and the Ballarat and Bendigo Schools of Mines, have also an extensive curriculum embracing the more important industrial subjects. Special attention has been given in recent years to the provision of technical education for girls. There are, moreover, 25 Junior Technical Schools in existence, giving a two or three years' course of instruction to boys between the ages of 12½ and 15 years, thereby preparing them for the more advanced teaching in the higher schools.



Particulars regarding the growth of technical education in Victoria during the last five years are given in the appended table :—

TECHNICAL EDUCATION.—VICTORIA, 1923 TO 1927.

Year.	Number of Classes.	Number of Enrolments.	Average Attendance.	Fees Received.
1923 .. .. .	125	17,679	12,804	£ 32,286
1924 .. .. .	122	19,234	13,832	32,404
1925 .. .. .	125	19,439	15,018	31,250
1926 .. .. .	135	21,431	16,500	49,799
1927 .. .. .	291	21,500	16,300	36,698

One of the difficulties met with in connexion with the administration of a scheme of technical education is that of obtaining and retaining the services of a sufficient trained technical staff. During 1927, of the 578 teachers employed in technical schools, 490 were employed directly by the Councils of those schools.

4. Queensland.—Up to the passing of the “Technical Instruction Act of 1908,” technical education in Queensland was controlled by local committees, the State simply providing financial aid. Under the provisions of this Act, the State took over the technical colleges at Brisbane, South Brisbane and West End, and formed therefrom a Central Technical College. By an amending Act in 1918, power was taken to assume the control of other technical institutions as opportunity offered. Twelve colleges are now directly controlled by the Department and five by local committees. The Department’s policy of combining Technical Colleges with High Schools has proved very successful. During 1927 there were seventeen technical colleges in operation, while classes in technical subjects were held in a number of smaller centres. A certain amount of technical and vocational work is also provided for at the Rural Schools (see § 2, 4 (vi.c.)), and in some cases country apprentices in remote centres receive instruction by correspondence. Two Travelling Domestic Science Schools and a Manual Training School for boys have been constructed to meet the needs of districts where the population is not sufficient to warrant the establishment of permanent classes, and these institutions have been very successful. The schools are housed in specially-fitted railway cars, and remain for seven weeks at each of the towns visited. The progress of technical education since 1923 is shown in the following table :—

TECHNICAL EDUCATION.—QUEENSLAND, 1923 TO 1927.

Year.	Number of Classes.	Enrolments.	Estimated Average Weekly Attendance.	Number of Teachers.	Fees Received.
1923 .. .. .	607	11,565	10,000	387	£ 13,220
1924 .. .. .	611	13,002	11,000	364	13,633
1925 .. .. .	615	13,349	11,500	433	13,959
1926 .. .. .	(a)	13,871	11,600	444	13,780
1927 .. .. .	(a)	14,927	12,000	463	13,430

(a) Not available.

Greater attention is being devoted to the development of trade classes, and under the Apprenticeship Act of 1924, apprenticeship is controlled by the Minister for Works, while committees consisting of representatives of employers and employees have been

appointed for the various skilled trades. Attendance at apprentices' classes is compulsory in the towns to which the provisions of the scheme have been extended, and this has had the effect of considerably increasing the number of student hours of instruction as compared with earlier years.

In his Report for the year 1926 the Superintendent of Technical Education mentions that the complaint is sometimes made that the educational authorities are supplying the type of training which leads to city occupations rather than to rural callings, and points out that the vocations of the people are not dependent upon the educational facilities provided, but upon definite economic laws.

5. **South Australia.**—Prior to the year 1917 the condition of affairs in regard to technical education in South Australia was regarded by the Education Department as unsatisfactory. There was a School of Mines and Industries in Adelaide, and in addition Schools of Mines at Moonra, Port Pirie, Kapunda, Mount Gambier, and Gawler. While the Government bore the bulk of the cost of maintenance of these institutions, they were controlled by independent councils, and there was no regular co-ordination in regard to staffs, curriculum, etc. A Director of Technical Education was appointed in 1916, and the re-organization of the system was thereupon undertaken. The position in 1921 was, however, still unsatisfactory, as the control of technical education in the State rested with two bodies, (a) the Council of the South Australian School of Mines and Industries whose activities are confined to the metropolitan area; and (b) the technical branch of the Education Department, which deals with schools in the metropolis, as well as throughout the country districts. During that year, an amending Act dealing with the technical education of apprentices was passed, and, by proclamation, the scope of the original Act was widened so as to include over 150 separate trades. Regular meetings of the Apprentices Advisory Board were held, and improvements in conditions of apprenticeship were made on their recommendation. At the end of 1927, 748 apprentices and probationers were enrolled in the various classes, and 762 were registered and awaiting enrolment. The total number of registrations since the inception of the Act was 4,157, and of these 793 had completed the full three years' course and received tradesmen's certificates. Country Technical Schools in 1927 had an enrolment of 2,146, and at the Thebarton Technical High School the pupils numbered 350. By means of Saturday classes and special Vacation Schools, a large number of male teachers and a few women teachers have qualified as instructors in woodwork.

Particulars regarding the position of technical education in the State during the five years 1923 to 1927 are given hereunder:—

#### TECHNICAL EDUCATION.—SOUTH AUSTRALIA, 1923 TO 1927.

Year.	Number of Classes.	Enrolments.	Average Attendance.	Number of Teachers.	Fees Received.
1923 .. .. .	332	11,339	8,834	175	£ 6,309
1924 .. .. .	421	12,312	9,416	185	6,465
1925 .. .. .	479	13,098	10,036	202	6,456
1926 .. .. .	536	13,363	10,395	201	7,910
1927 .. .. .	542	14,054	10,770	199	8,151

6. **Western Australia.**—During the year 1927 the Perth Technical School had an average enrolment of 2,210 students each term. The school is affiliated with the University, and provides instruction in University work for evening students in mathematics, physics, chemistry, and geology. An interchange of lecturers between the two institutions resulted in the establishment of diploma courses in mechanical, structural, and electrical engineering, and the University engineering laboratories at Crawley became available to technical school students. The trade classes are well supported, and

particular attention is devoted to subjects of value to the skilled tradesman. Committees, including representatives of employers' and workers' unions, have been formed for each group of trades, and confer regularly with the trade instructors, make inspections, and furnish recommendations. Railway apprentices attend the day-classes at Perth and Midland Junction, and classes are also held for mechanics in the Postal Department. The average enrolment in 1927 at the Fremantle School was 560, at Midland Junction 120, and at Boulder 230, while smaller groups of classes were conducted at Kalgoorlie, Claremont, Geraldton, Beverley, and Collie. The schools are all under the control of the Education Department, the officer entrusted with the supervision being styled Director of Technical Education.

Returns for the last five years are embodied in the table hereunder :—

TECHNICAL EDUCATION.—WESTERN AUSTRALIA, 1923 TO 1927.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1923 .. .. .	446	6,850	(a)5,552	146	2,988
1924 .. .. .	451	7,002	(b)5,633	147	2,837
1925 .. .. .	453	7,487	(c)6,146	147	3,116
1926 .. .. .	432	7,869	(d)6,468	142	2,944
1927 .. .. .	463	7,594	(e)6,003	154	3,199

(a) 3,409 individual students. (b) 3,423 individual students. (c) 3,554 individual students.  
 (d) 3,500 individual students. (e) 3,498 individual students.

7. Tasmania.—The scheme of technical education includes provision for courses of training in industrial, commercial, and domestic pursuits. Under the first-mentioned, junior technical schools, applied science schools, technical trade schools, and art and applied art schools have been established, and it is to this group that the activities of the Department have hitherto been almost exclusively confined. The co-operation of employers and employees has been obtained, and certain of the more advanced courses have been co-ordinated with the courses given at the University. There are Junior Technical Schools at Hobart, Launceston, and Queenstown, with a total enrolment in 1927 of 543. Senior Technical Schools are in operation at Hobart and Launceston organized into Departments of Engineering and Applied Science, Art, and Trade; and at Queenstown and Zeehan, courses in Metallurgical and Mining Engineering are undertaken. The Queenstown School is assisted by a subsidy given by the Mount Lyell Company, and the Zeehan institution receives support from the Electrolytic Zinc Company in the shape of a yearly subsidy of £150.

TECHNICAL EDUCATION.—TASMANIA, 1923 TO 1927.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1923 .. .. .	254	1,151	(a)	72	1,133
1924 .. .. .	(a)	1,351	971	83	1,533
1925 .. .. .	254	1,450	978	90	1,412
1926 .. .. .	(a)	1,547	1,114	84	1,660
1927 .. .. .	(a)	1,601	1,207	95	1,608

(a) No record.

8. Expenditure on Technical Education.—The expenditure on technical education in each State during the period 1923 to 1927 is shown below :—

TECHNICAL EDUCATION.—EXPENDITURE, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
1923	(a) 146,158	215,320	60,824	46,655	18,189	18,271	505,417
	(b) 16,971	45,649	13,379	3,461	1,590	366	81,416
1924	(a) 166,844	239,319	62,888	56,140	18,229	20,415	563,835
	(b) 7,100	53,572	3,514	5,811	1,003	127	71,127
1925	(a) 169,002	255,790	78,720	56,821	18,391	20,353	599,077
	(b) 27,504	95,686	4,632	9,760	522	57	138,161
1926	(a) 182,714	282,555	89,555	66,397	22,653	20,758	664,632
	(b) 59,993	64,448	9,867	15,397	2,264	356	152,325
1927	(a) 191,040	313,124	87,833	70,792	20,840	22,539	706,168
	(b) 61,215	49,297	3,441	10,726	1,287	980	126,946

(a) Maintenance. (b) Buildings.

The expenditure on maintenance for technical education in 1927 amounted to 2s. 3d. per head of the population of Australia, as compared with 29s. per head expended on maintenance for primary and secondary education.

§ 7. Business Colleges and Shorthand Schools.

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

BUSINESS COLLEGES, SHORTHAND SCHOOLS, ETC., 1927.

State.	Schools.	Teachers.	Students Enrolled.		Average Attendance.		Fees Received.
			Males.	Females.	Males.	Females.	
New South Wales..	20	145	2,158	6,066	772	2,834	£ 57,796
Victoria ..	14	128	2,653	2,569	2,058	1,879	(b)
Queensland (a) ..	..	..	..	..	..	..	..
South Australia ..	7	51	834	1,504	601	1,041	17,217
Western Australia..	11	53	1,804	1,897	(b)	(b)	28,398
Tasmania ..	3	17	150	612	78	249	4,273

(a) Included in private schools. (b) Not available.

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

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

§ 8. Diffusion of Education.

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

in these three divisions is given for each Census since 1871. Particulars for each State and Territory were included in previous issues of the Official Year Book (see No. 19, p. 439).

**EDUCATION AT CENSUS PERIODS, AUSTRALIA, 1871 TO 1921.**

Division.	1871.	1881.	1891.	1901.	1911.	1921.
Read and write ..	1,037,601	1,591,556	2,394,339	3,020,665	3,766,251	4,607,579
Read only ..	177,596	138,282	108,870	78,614	18,599	14,609
Cannot read ..	447,842	520,356	671,183	674,522	670,155	813,546

It will of course be understood that the heading "cannot read" includes a large proportion of children under five years of age.

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

**PROPORTION OF EDUCATED AND ILLITERATE PER 10,000 PERSONS, 1871 TO 1921.**

(AUSTRALIA.)

Division.	1871.	1881.	1891.	1901.	1911.	1921.
Read and write ..	6,239	7,073	7,543	8,004	8,454	8,481
Read only ..	1,068	615	343	208	42	28
Cannot read ..	2,693	2,312	2,114	1,788	1,504	1,491

As pointed out previously, the "cannot read" group includes a large proportion of children under five years of age.

**2. Education of Children.**—The figures in the preceding tables refer to the entire population of Australia, and as the age constitution of those dwelling in the various portions thereof 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 from 1861 to 1921 for Australia will be found below. Particulars for each State and Territory were given in preceding issues of the Official Year Book.

**EDUCATION OF CHILDREN OF SCHOOL AGE AT CENSUS PERIODS, AUSTRALIA, 1861 TO 1921.**

Division.	1861.	1871.	1881.	1891.	1901.	1911.	1921.
Read and write ..	107,201	255,374	394,001	549,049	711,004	800,139	977,105
Read only ..	59,219	89,818	70,662	53,136	42,856	2,614	1,287
Cannot read ..	58,945	86,961	93,381	121,443	136,712	83,659	146,406

The variation in degree of education may be more readily seen by reducing the foregoing figures to the basis of proportion per 10,000, and the results so obtained are embodied in the following table, a glance at which is sufficient to demonstrate the remarkable strides that at least the lower branches of education have made since 1861. In that year, only 48 per cent. of the children of school age could read and write, while 26 per cent. were illiterate. The returns for 1921 show that the proportion of those who could read and write had increased to over 87 per cent., while the totally illiterate had declined to 13 per cent.

EDUCATION OF CHILDREN (AGES 5 TO 14) PER 10,000 AT CENSUS PERIODS,  
AUSTRALIA, 1861 TO 1921.

Division.	1861.	1871.	1881.	1891.	1901.	1911.	1921.
Read and write ..	4,757	5,910	7,061	7,588	7,984	9,027	8,687
Read only ..	2,628	2,078	1,266	734	481	29	11
Cannot read ..	2,615	2,012	1,673	1,678	1,535	944	1,302

3. Education as shown by Marriage Registers.—Another common method of testing the spread of education is to compare the number of mark signatures in the marriage registers with the total number of persons married during each year of a series. The percentage signing with a mark to the total persons married in the Census year 1921 was only 0.17, as compared with 24.60 in 1861.

### § 9. Miscellaneous.

1. Scientific Societies.—(i) *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 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 Philosophic 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" were published in 1867, the title of the series being altered to "Journal" in 1878. Up to the end of 1928, 62 volumes had been published. The exchange list comprises the names of 385 kindred societies. At the present time the library contains over 30,000 volumes and pamphlets, valued at about £9,000. Income and expenditure for the year ended 31st March, 1928, were £1,835 and £1,908 respectively, and the Society had on the same date 346 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. Up to 1928, 73 volumes of proceedings had been issued. The Society exchanges with 320 kindred bodies. The constitution of the Society states that it was founded "for the promotion of art, literature, and science," but for many years past science has monopolized its energies. A mathematical and physical section encourages discussion in these sciences. The library contains over 17,000 volumes, valued approximately at £4,500. Income for the year 1928 amounted to £608, and expenditure to £477. There are 209 members on the roll.

The inaugural meeting of the Royal Society of Queensland was held on the 8th January, 1884, under the presidency of the late Sir A. C. Gregory. The Society was formed "for the furtherance of the natural and applied sciences, especially by means of original research." Shortly after its formation it received an addition to its ranks by the amalgamation with it of the Queensland Philosophical Society, which was started at the time when Queensland became a separate colony. At the end of 1928 the members numbered 179; publications issued, 40 volumes; library, 7,500 volumes; societies on exchange list, 234. Income and expenditure for the year amounted to £356 and £346 respectively.

The 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 thence forward being known as "The Royal Society of South Australia." In 1903 the society was incorporated. In 1927 the number of members was 149. The income for the year 1927-8 was £715, and expenditure £691. Up to 1928 the Society had issued 52 volumes of proceedings and 8 parts of memoirs, exclusive of several individual papers published in earlier years. The exchange list numbers about 230, while the library contains 5,200 volumes and over 1,950 pamphlets. The Field Naturalists section of the Society comprises 179 members, and issues a small quarterly journal called "The South Australian Naturalist."

Permission to assume the title of Royal Society was granted to the Natural History and Science Society of Western Australia in March 1914. This Society has grown out of the Mueller Botanic Society, founded in July, 1897. The objects of the Society are the study of natural history and pure science, promoted by periodical meetings and field excursions, the maintenance of a library, and issue of reports of proceedings. It numbers at present 211 members. The income and expenditure in 1927-28 were £380 and £231 respectively. Five volumes of proceedings were issued as Journal of the Natural History and Science Society of Western Australia, and thirteen as of the Royal Society. Its publications are exchanged with 115 institutions at home and abroad. The library contains some 250 volumes, and over 2,000 unbound journals, pamphlets, etc.

The Royal Society of Tasmania (the first Royal Society outside the United Kingdom) was inaugurated by Sir Eardley Wilmot, Lieutenant-Governor of Van Diemen's Land on the 14th October, 1843. It may be mentioned, however, that a scientific society had been formed as far back as 1838 under the presidency of Sir John Franklin, then Governor of the colony, and in 1841 the number of resident members was 31, and corresponding members, 38. The meetings of this parent society were held at Government House, and three volumes of proceedings were issued. A large portion of the Colonial Gardens, together with a grant of £400, was given to the Society. A library and museum were established in 1848. In 1885 the museum and gardens were given back to the State, the Society being granted room in the museum for its library and meetings. The names of Captains Ross and Crozier, of H.M.S. *Erebus* and *Terror*, appear in the list of the first corresponding members. The Society, which since 1844, has published 65 annual volumes of proceedings, possesses 257 members, 7 corresponding members, 6 life members, exchanges with 257 kindred bodies, and has a library containing 16,050 volumes, in addition to manuscripts, etc., valued at over £10,000. Income for the year 1928 was £344 and expenditure £343.

(ii) *The Australasian Association for the Advancement of Science.* This Association was founded in 1887, with head-quarters at the Royal Society's House in Sydney. It was recognized that in addition to Royal, Linnean, and Naturalists' Societies generally, there was a decided necessity for an organization representative of scientific education in Australia and New Zealand "to give a stronger impulse and a more systematic direction to scientific inquiry, to promote the intercourse of those who cultivate science in different parts of the Commonwealth of Australia, the Dominion of New Zealand, and in other countries, to obtain more general attention to the objects of science, and a removal of any disadvantages of a public kind which may impede its progress." The Association aims at co-operation between the workers in the various branches of science on the one hand, and between the professional scientist and the general public on the other. Its meetings are usually held biennially within the various States and in the Dominion of New Zealand. The next meeting will be held in Brisbane in May, 1930. Although the actual funds of the Association are small, liberal aid has always been forthcoming from the various State Governments, especially in connexion with the printing of the important volumes of its proceedings, of which Vol. XVIII. is the latest issued. The library of the Association contains 4,000 volumes. Not the least important of the activities of the Association was the giving a constitution to the Australian National Research Council which brought in its train the Pan-Pacific Science Congress of 1923.

(iii) *Other Scientific Societies.* The Linnean Society of New South Wales, with headquarters in Sydney, was founded in 1874. The soundness of its present position is due to the benefactions of Sir William Macleay, who during his lifetime and by his will endowed the Society to the amount of £67,000, which has been increased by judicious investment to over £80,000. Income for the year 1928 amounted to £5,861 and expenses to £3,650, including £766 for research purposes. The Society maintains a research bacteriologist (the position was vacant in 1928), and offers annually 4 research fellowships in various branches of natural history. Two scholarships were awarded in 1928. The library comprises some 14,000 volumes, valued at about £7,000. Fifty-three volumes of proceedings have been issued, and the Society exchanges with some 200 kindred institutions. The ordinary membership at the end of 1928 was 170.

The British Astronomical Society has a branch in Sydney, and in some of the States the British Medical Association has branches.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

2. **Public Libraries.**—(i) *States.* In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favourably with similar institutions elsewhere. The following statement gives the number of volumes in the Public Library of each capital city:—

**METROPOLITAN PUBLIC LIBRARIES, 1927.**

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Sydney .. .. .	(a) 412,849	(b) .. .. .	46,738	459,587
Melbourne .. .. .	388,664	49,696	.. .. .	438,360
Brisbane .. .. .	52,191	.. .. .	.. .. .	52,191
Adelaide .. .. .	143,650	66,114	.. .. .	209,764
Perth .. .. .	127,758	.. .. .	18,685	146,443
Hobart .. .. .	30,000	.. .. .	.. .. .	30,000

(a) Including 120,548 volumes in the Mitchell Library.

(b) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. At the end of December, 1927, the books numbered 46,738.

During 1921 the Public Library authorities in Sydney inaugurated the system of lending boxes of children's books to country schools, and a large number of these children's travelling libraries is now in operation. Boxes are forwarded to out-back schools distant from towns. Each box contains about 40 books, and is lent for a period of four months, and then exchanged for another collection, the Library Trustees defraying the cost of carriage both ways. During the year ended 30th June, 1927, reference books to the number of 32,852 were sent by post on loan to 21,105 borrowers in the country areas.

A special research staff attached to the Public Library gives valuable assistance in making readily available to inquirers the store of information contained in books, etc., which, owing to limitations of space, are not in open access.

The Mitchell Library in Sydney consisted of over 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia, valued at £100,000, and bequeathed in 1907 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testators stipulated that the regulations of the British Museum were to be adopted as far as practicable, hence the library is the resort of specialists. There are now over 120,000 volumes in the library in addition to valuable collections of Australian postage and fiscal stamps.

Amongst other important libraries in New South Wales may be mentioned the "Fisher" Library at Sydney University, with 176,000 volumes; the library at the Australian Museum, 26,000; the Teachers' College library, 30,000; Sydney Technical College library, 14,000; and the library at the Botanic Gardens, 9,800. The libraries attached to State schools contain about 481,000 volumes.

The reading room at the Melbourne Public Library ranks among the finest in the world. It was opened in 1913, and has a diameter of 114 feet, with a similar height, and is capable of seating 320 readers at a time, all of whom are under efficient supervision



from the centre of the room. During the year 1927, 3,992 volumes were lent to Mechanics' Institutes and Free Libraries, and 4,875 books were sent by post to borrowers in the country.

The library at Brisbane (South) contained about 14,300 volumes at the end of June, 1927.

For some years past efforts have been made in South Australia to collect original documents likely to be of service in compiling a history of the State. So far back as 1914, Professor Henderson, of Adelaide University, under commission from the South Australian Government, visited and reported on the system of keeping archives in England, France, Belgium, Holland, and Ceylon, and obtained valuable information also from the United States and Canada. A department of historical documents has been created under the care of an archivist, and valuable work has been done in connexion with examination, classification, and permanent preservation of the available papers. A suitable building for housing the documents and the staff was provided in 1921. At the 30th June, 1927, the collection numbered 260,000 documents, 1,156 views, and 793 maps.

During 1922 the Tasmanian Public Library adopted the plan of lending books to individual country borrowers and to families or committees of residents in country districts. The Public Library at Launceston contains 34,000 volumes.

Statistics in regard to libraries generally are not available for all States, while the information supplied is not in all cases complete. Returns for Victoria in 1927 showed a total of 426 libraries in receipt of State or municipal aid, containing 1,319,000 books; Queensland returned 258 libraries, with 510,000 books; South Australia, 261 libraries and 814,000 books; Tasmania, 22 libraries and 124,000 books; while there were 3 libraries, with 6,000 books, in the Northern Territory.

(ii) *Commonwealth (a) Parliamentary and National Library.* When the Commonwealth Parliamentary Library was created in 1902, it was recognized that at such time as the Federal Capital was established it would be necessary to have available there, for the use of members and the public servants, a library whose scope was wider than that usually associated with a purely Parliamentary one. To this end, therefore, this library was developed on lines similar to those of a State Public Library, and particular attention was given to the acquisition of works relating to or published in Australia. In pursuance of this policy it acquired in 1909 a valuable collection of *Australiana*, comprising about 10,000 volumes, which had been formed by Mr. E. A. Petherick. In 1912, also, a provision was included in the Commonwealth Copyright Act requiring the publisher of any book, pamphlet, etc., printed in the Commonwealth to supply a free copy to this library. In the same year it undertook the publication of the Historical Records of Australia. The rapid development of the Australian and National Sections of the library led the Library Committee in 1923 to decide that the title "Commonwealth National Library" should be given to these, and that at Canberra the library should be divided into two sections—a Parliamentary and a National Section—the former to be housed in Parliament House, the latter in a separate building, to which the public would be given free access. Though now, therefore, in two sections, it is essentially one library, with one administration.

The total number of volumes at the beginning of 1928 was 79,000 books and 6,500 pamphlets, its chief features being its unique collection of Captain Cook's manuscripts and early works relating to Australia, also its extensive series of official publications of Great Britain and all the Dominions.

(b) *Patents Office Library.* The free library attached to the Commonwealth Patents Office in Melbourne contains over 45,000 volumes, and includes literature dealing with patents in the principal countries of the world.

3. **Public Museums.**—The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing fine collections 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 £82,000. The number of visitors to the institution in 1927 was 234,000, and the average attendance on week-days 658, and on Sundays 1,512. The expenditure for 1927 amounted to £23,600. A valuable library containing about 26,000 volumes is attached to the Museum. Courses of evening popular lectures are delivered

and lecturers also visit distant suburbs and country districts, while afternoon lectures for school children are provided. Nature talks are also broadcast by wireless. Representative collections illustrative of the natural wealth of the country are to be found in the Agricultural and Forestry Museum and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids in country schools. The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, and the Museum of Normal and Morbid Anatomy, connected with the University, and the National Herbarium and Botanical Museum, at the Sydney Botanic Gardens, are all accessible to the public. There is a fine Technological Museum in Sydney, with branches in five country centres. Valuable research work is being performed by the scientific staff in connexion with oil and other products of the eucalyptus, and the gums, kinos, tanning materials, and other economic products of native vegetation generally. During 1922 the work of the Museum was strengthened by the appointment of an advisory committee representing the scientific, general, and industrial activities of the State.

The National Museum at Melbourne, devoted to Natural History, Geology, and Ethnology, is located in the Public Library Building. The National Art Gallery is situated in the same building. The Industrial and Technological Museum, also housed under the same roof, contains about 10,000 exhibits. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion 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 £121,773, of which buildings absorbed £21,321, purchases £33,477, and salaries £66,975. The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

Under the Public Library Act of 1884 the South Australian Institute ceased to exist, and the books contained therein were divided amongst the Museum, Public Library, and Art Gallery of South Australia, and the Adelaide Circulating Library. The Museum was attended by 99,000 visitors in 1927. Cost of construction of the Museum building was returned as £65,000.

The latest available returns show that the Western Australian Museum and Art Gallery contains altogether 111,000 specimens, of an estimated value of £86,000. The Museum, Art Gallery, and Library are housed in one building, and the visitors to the combined institutions during the year reached 94,000. At the 30th June, 1927, the structure was valued at £65,000.

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, mineral, and miscellaneous products. The Museums received aid from the Government during 1927-28 to the extent of £1,725. The cost of construction in each case is included in that of Art Galleries given below.

**4. Public Art Galleries.**—The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction of the present building amounted to about £94,000. At the end of 1926 its contents, which are valued at £175,000, comprised 566 oil paintings, 434 water colours, 856 black and white, 186 statuary and bronzes, and 819 ceramics, works in metal and miscellaneous. During the year the average attendance on week-days was 468, and on Sundays 1,500. Since the year 1895 loan collections of pictures have been regularly forwarded for exhibition in important country towns.

The National Gallery at Melbourne at the end of 1927 contained 738 oil paintings, 5,553 objects of statuary, bronzes, ceramics, etc., and 18,023 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 £396,000. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. The Art Gallery at Ballarat contains over 400 oil paintings and water colours, with

some fine statuary, bronzes, etc., while there are some valuable works of art in the small galleries at Bendigo, Castlemaine, Geelong, and Warrnambool, and in some cases pictures are sent on loan from the National Gallery.

The Queensland National Art Gallery, situated in the Executive Buildings, Brisbane, was founded in 1895, and contains a small, but well chosen collection of pictures. At the end of 1926 there were on view 109 oil paintings, 28 water colours, 208 black and white, and 33 pieces of statuary, together with various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £12,000. Visitors during the year averaged 144 on Sundays and 123 on week-days.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 in the purchase of pictures, which were exhibited in the Public Library Building in 1882. The liberality of private citizens caused the gallery rapidly to outgrow the accommodation provided for it in 1889 at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir T. Elder, the Government erected the present building, which was opened in April, 1900. The Gallery also received bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and of £3,000 in 1907 from Mr. David Murray. At the 30th June, 1927, there were in the Gallery 718 paintings in oil and water colour, 281 drawings and black and white, 251 statuary, furniture and art work, 6,452 prints, and 1,479 ceramics and miscellaneous. Building and site are valued at upwards of £31,000. Visitors during the year 1927 numbered 86,000. The cost of construction of the Art Gallery amounted to £22,000.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, and, as in the case of Melbourne, the Public Library, Museum, and Art Gallery are all situated in the one structure. The collection comprises 132 oil paintings, 57 water colours, 687 black and white, 274 statuary, and 1,200 ceramic and other art objects, the whole being valued at £22,000. Cost of construction of the buildings amounted to £12,000.

In Tasmania, the Art Gallery at Hobart was opened in 1887. Its present contents consist of 133 oil paintings, 140 water colours, 25 black and white, 4 statuary, and 181 etchings, engravings, etc. The cost of construction of the building was £5,000.

The Art Gallery at Launceston was erected in 1888 at a cost of £6,000, and opened on the 2nd April, 1891. Only a small proportion of the contents belongs to the gallery, the bulk of the pictures being obtained on loan. At latest date there were on view 110 oil paintings, 66 water colours, and 28 statuary, engravings and miscellaneous exhibits.

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, 1923-24 TO 1927-28.

State or Territory.	1923-24.	1924-25.	1925-26.	1926-27.	1927-28.	
New South Wales ..	Total £	3,779,896	3,987,709	3,994,722	4,165,590	4,378,942
	Per head	34/2	35/4	34/8	35/5	36/5
Victoria ..	Total £	2,166,763	2,259,529	2,392,948	2,594,867	2,840,050
	Per head	26/8	27/3	28/5	30/4	32/7
Queensland ..	Total £	1,410,089	1,510,944	1,596,474	1,613,155	1,660,457
	Per head	34/9	36/2	37/1	36/7	36/11
South Australia ..	Total £	709,728	764,914	876,620	960,374	993,965
	Per head	27/0	28/5	31/9	33/11	34/6
Western Australia ..	Total £	621,168	628,755	644,459	697,379	720,956
	Per head	35/1	34/6	34/8	36/10	36/9
Tasmania ..	Total £	271,321	286,334	297,406	306,106	317,990
	Per head	24/9	26/3	27/5	28/6	29/6
Northern Territory	Total £	4,515	4,858	7,937	6,051	6,614
	Per head	25/5	27/0	43/5	31/0	30/4
Australia ..	Total £	8,963,480	9,443,043	9,810,566	10,343,522	10,918,974
	Per head	31/2	32/2	32/9	33/10	35/0

The comparatively heavy increases during the last five years are partly due to the expanding provision for State-aided education, to greater cost of building, equipment, and maintenance, and to increments in teachers' salaries and allowances.