

GOVERNMENT OF MADRAS
(DEVELOPMENT DEPARTMENT)

TECHNICAL AND INDUSTRIAL EDUCATION

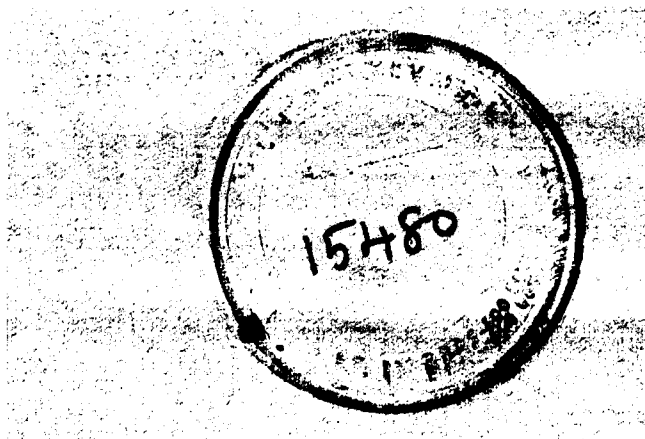
REPORT OF THE COMMITTEE APPOINTED IN G.O. No. 528,
DATED 8TH APRIL 1922.

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Government of Madras

DEVELOPMENT DEPARTMENT

G.O. No. 477, 6th April 1923

Industrial and Technical Education Committee—Report—Published.

READ—the following paper :—

G.O. No. 528, Development, dated 8th April 1922.

Order—No. 477, Development, dated 6th April 1923.

The report of the Committee appointed in G.O. No. 528, Development, dated 8th April 1922, to consider the question of Industrial and Technical education in the Madras Presidency is placed on the Editors' Table.

ENCLOSURE

[Report of the Committee]

(By order of the Government, Ministry of Development)

J. M. TURING,
Secretary to Government.

To the Director of Industries.
" Secretary, Legislative Council.
" Accountant-General.
Editors' Table.

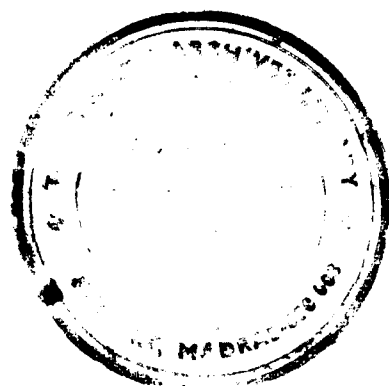
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LIST OF MEMBERS.

M. E. Couchman, Esq., I.C.S., First Member, Board of Revenue (President).
The Director of Industries, Madras.
The Director of Public Instruction, Madras.
The Principal, Engineering College, Guindy, Madras.
The Rev. B. Rottschaeffer, Correspondent, Industrial School, Katpadi.
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W. Fyfe, Esq., Inspector of Industrial Schools, Madras (Secretary).
D. M. Amalsad, Esq. (co-opted), Textile Expert to the Government of Madras, Madras.
M.R.Ry. M. K. Dandekar Avargal (co-opted), Principal, Government School of Commerce, Law College Buildings, Madras.
The Rev. V. Theill (co-opted), Correspondent, Danish Mission Industrial School, Panruti (South Arcot).

CHAPTER I.

INTRODUCTORY.

The development of Technical and Industrial education in the Presidency up to the present time has been closely associated with the development of the Department of Industries, but this committee is concerned exclusively with the educational side of the question and it would perhaps be out of place to dwell too much on the subject of industrial development in the Presidency as a whole. The history of that subject may be found fully developed in several publications and reference may be made to the memorandum in the Department of Industries written by the Hon'ble Mr. Innes in 1916 when he was the Director of the Department.

2. A convenient starting point for the purpose of this inquiry is the Industrial Conference held at Ootacamund in 1908 which considered the whole subject of industrial development and in particular reviewed the question of improving and extending technical education. As a result of that Conference, the Local Government, in March 1909, proposed to the Secretary of State (Lord Morley)—

- (1) that a permanent Department of Industries should be created;
- (2) that industrial education, as opposed to technical education, should be placed under this department;
- (3) that the department should be entrusted with the duty of encouraging trade by the introduction of new industries.

We are concerned mainly with the second resolution.

3. Lord Morley, however, in a despatch, dated 29th July 1910, negatived these proposals but agreed to the appointment of a Superintendent of Industrial Education working under the Director of Public Instruction, and to the recruitment of Dyeing, Weaving, and Leather Experts, to be employed exclusively for instructional purposes.

4. It is interesting to observe that we have here the answer Lord Morley gave to the first question our committee is directed to answer, namely, whether the control of institutions for Technical, Engineering, Industrial, and Commercial Education, should be centralized in the Department of Industries. His answer was to order the abolition of the infant department.

5. Industrial opinion, however, did not accept quietly these orders. The Sixth Industrial Conference held at Allahabad in December 1910 protested against the abolition of the Department of Industries and in the following February, the Legislative Council of Madras passed a resolution requesting the Secretary of State to reconsider his decision. There followed considerable correspondence between the Government of Madras, the Imperial Government, and the Secretary of State, as to the functions of a separate Department of Industries, as a result of which the Department of Industries came into existence in its present form in March 1914, one of its functions being to supervise industrial education.

6. If the development of industrial education was seriously hampered by the uncertainty that prevailed as to the authority which should control technical and industrial education from the receipt of Lord Morley's despatch in 1910 till final orders were passed by his successor Lord Crew in 1914, the outbreak and long duration of the Great War inevitably acted as a brake on further development for the energies of the country were directed into the single channel of War-work, while the industrial experts who had been recruited either went on active service or directed their energies to War-work.

7. But if the war hampered the extension of industrial and technical education, the demands in India for industrial products of many kinds created by this war not only gave an impetus to manufactures but also created a demand for a higher grade of industrial workers in all classes and created the need for education to meet the demand; and this intensified the problems it is our task to solve or, attempt to solve.

8. The terms of reference to our Committee are very wide and it will be convenient to deal with the various points in detail in the succeeding chapters. Before doing so, however, it seems necessary to review briefly the institutions that are now in existence for the provision of commercial, industrial and technical education. Not all of these are under the control of the Department of Industries and we do not intend to propose that those which are not so controlled should be brought under that department. We believe that we may omit from consideration the College of Agriculture, administered, as it should be, by the Department of Agriculture and the Forest College, both of which subserve the needs of important departments with which our Committee has no concern. There remain the institutions under the Department of Public Instruction which provide technical and commercial training and those institutions which specialising in industrial training are at present under the control of the Director of Industries.

9. In the former class are the College of Engineering, Guindy, which as will be shown, we propose, should be developed into a Technological institution providing the higher education required of the superior directing agency such as Chief Engineers, Factory Managers, etc.

10. The School of Commerce at Calicut and the Institute of Commerce at Madras we propose, as the report will show, to be developed into commercial colleges and to remain under the Department of Public Instruction. There are also a few aided institutions teaching commercial subjects.

11. Under the Department of Industries come--

(a) the following Government institutions:—

- (1) The Leather Trades Institute.
- (2) The Madras Government Trades School.
- (3) The Madura Industrial Institute.
- (4) The School of Arts, Madras.

(b) Aided institutions.

The Leather Trades Institute is now worked partly as a model tannery and school and partly as research institute. Its objects are—

(1) To give students a thorough grasp of the principles underlying the various tanning processes.

(2) To instruct them in as many of the common processes and methods as they can assimilate in the period spent in the course which lasts for three years. It is considered that on completion of the ordinary course, students who have had any experience in handling labour and in factory work would be suitable for employment as departmental foremen or assistant foremen according to the scale of the factory employing them. The Institute is now equipped to undertake research work in connexion with tanning problems.

12. The Government Trades School, Madras, has for its object to supply the industrial public with skilled mechanics, electricians, plumbers, and other artisans equipped with a sound theoretical and practical training. Admission is restricted to bona fide apprentices and workmen who are actually engaged in the trade they wish to study. The school is popular and well attended and is capable of great development as soon as money can be provided for a proper building and increased accommodation. Most of the classes are held in the evenings, but a few classes are now held in the mornings and the students allowed time off duty to attend in working hours.

A branch of the school is held at Perambur where Railway workshop apprentices receive a training in mechanical engineering subjects. Two courses of five years have been arranged, one for well educated youths and one for those whose qualifications are lower. The classes are held in working hours and about 100 apprentices receive four hours instruction per week. Evening classes also have recently been opened at Perambur for young workmen, and are very popular.

13. The Madura Industrial Institute was reorganized quite recently and now provides five years' full time apprenticeships in (a) metal-working and (b) wood-working. During the first four years, a fair proportion of the apprentice's time is given to literary studies based on industries with the object of preventing him from forgetting what he has learnt in the few years' school course before joining the institute. In addition to the five years' full-time course, short courses are provided in 'motor-car driving and mechanism' and in 'oil-engine driving and the care of industrial machinery'. It is too early to express a definite opinion on the results of the reorganization of the institute, but the scheme appears to be working quite well and it is intended that when the first batch of students have completed their five years' apprenticeship the whole scheme should be overhauled and alterations made, if necessary.

14. The School of Arts, Madras, which was recently transferred to the Department of Industries provides a training in art and design as applied to various industrial crafts. There are separate departments in the school for 'cabinet-making', 'metal-working', including 'silver-smithing', 'jewellery', 'wood and copper-engraving, and dye-sinking', 'lacquer work', 'painting', 'design', 'carpet-weaving', 'modelling', 'geometrical-drawing', a 'life-drawing class' and a 'drawing-class for ladies'; principally employed as teachers in schools under the Department of Public Instruction, who wish to improve their knowledge of drawing as a school subject. Each of the classes mentioned above is conducted as far as possible as a little workshop in which the students are learning the particular art or craft, they have chosen. The classes begin at 8 a.m., and finish at 4 p.m., except on Saturdays when the school closes at 11 a.m. There are no fees except for the ladies' drawing class, where the scale is according to the grade entered: Re. 1, Rs. 1-8-0 Rs. 2, or Rs. 3 per mensem.

15. A separate committee was recently appointed by Government to consider certain questions relating to this institution. It is understood that that separate committee has now submitted its report, but copies of that report have not yet been made available to the general public or to the members of this Committee.

Textile Institute.

16. The Textile Institute, Madras, has been instituted to provide—

(a) instruction in improved methods of handloom weaving and the preparatory processes allied thereto.

(b) to encourage the construction and manufacture of various types of improved appliances and to popularise the use of hand machines for hosiery work.

17. It is intended that the institute shall also serve as a museum for the display of various types of hand-woven fabrics and of improved appliances and weaving accessories. Experimental work will be undertaken in connexion with improved appliances to facilitate the manufacture of certain special fabrics. A textile testing laboratory on a small scale has already been installed. The institute is well equipped with various machines for preparatory processes and machinery for textile testing purposes. Three day courses of training have been arranged for. The senior weaving course extends over two years, the junior weaving course for one year only, while the artisan class takes six months. The senior course is intended for those who desire to become weaving superintendents in the Department of Industries, teachers in weaving schools, or managers of handloom weaving factories. The junior course is intended for those desirous of becoming maistris in the Peripatetic Weaving Parties or handloom factories, or demonstrators in schools of weaving. The artisan course is intended to provide a purely practical training in weaving, or in the preparatory processes allied thereto, or in hosiery work.

18. For the present, at all events, fees are not charged and certificates will be awarded to students who complete satisfactorily the course taken, with an attendance of 80 per cent or over.

19. The aided institutions providing industrial education are 39 in number scattered over the Presidency and conducted mostly by missionary enterprise.

Aided schools. Whilst the Government institutions have been started in an attempt to supply the want or need for the type of instruction which they provide, the missionary institutions aided by the department have been started from a rather different cause. The oldest of them were started as a result of the great famine when many Christian missions found themselves responsible for a large number of famine children, and in an endeavour to find a livelihood for these children, they started workshops where the children could learn the rudiments of trades sufficient for their maintenance. Some of these old schools are still in existence and have been developed considerably in accordance with modern ideas. A few have been closed whilst others have been started in various areas to take their places. Purely Indian institutions have been started in some cases very much on the original missionary model. The purely Indian institutions are at present situated in Madras, Parlākimedi, Vellore, Melvisharam, Alwartirunagari and Guntūr. Most of these aided institutions have been established in the south of the Presidency whilst the West Coast, the Ceded districts and the Circars have comparatively few schools of this kind.

CHAPTER II.

COMMERCIAL EDUCATION.

20. We are unanimously agreed that commercial education should remain under the Director of Public Instruction. We understand that the present facilities for commercial education consists of:—

Existing facilities.

- (1) The Government Institute of Commerce, Madras.
- (2) The School of Commerce, Calicut.
- (3) Aided classes in the Young Men's Christian Association, and Young Women's Christian Association, Madras.
- (4) Aided classes in the Pudupet Convent, Madras.
- (5) Commercial classes in about 100 secondary schools teaching commercial subjects (in C. Group) for the Secondary School-Leaving Certificate.
- (6) A number of private unrecognized and unaided classes or institutions teaching shorthand and type-writing, scattered throughout the Presidency.

21. With reference to existing institutions we are agreed that the present Institute of Commerce, Madras, should be developed into a Commercial College to prepare students for a degree in Commerce when such a degree has been established. We are further agreed that it is desirable to include Commerce as an optional subject of the Intermediate course. We understand that this is in consonance with the recent recommendations of a sub-committee of the Senate of the Madras University. We consider that the system of teaching commercial subjects in secondary schools including secondary schools for girls should be encouraged and developed and that such secondary school instruction should lead up to the Intermediate examination. We are further of opinion that the present Commercial School at Calicut should be raised to the Intermediate Grade and that two more commercial schools should be started one in the north of the Presidency and one in the south, on the model of the present school at Calicut.

22. With regard to future developments, we consider that continuation classes should be started in various centres throughout the Presidency to provide training in commercial subjects for persons who have left school and are engaged in occupations where a knowledge of such subjects would be of value; the time table of such classes being arranged to fit in with the ordinary working hours of the students, the classes being held in the mornings or afternoons. Such classes should be recognized and aided by Government on conditions which will ensure that the teachers are properly qualified and that the equipment is modern and sufficient. The classes should prepare students for Government Technical Examinations in commercial subjects and, should, we consider, meet the existing need for instruction in such subjects, the facilities for which are, at present, quite inadequate.

23. With regard to the provision of the necessary teachers of commercial subjects we believe that teachers can be trained at the two new schools which we have suggested should be established, at the present school at Calicut, and the Government Institute of Commerce at Madras, somewhat on the lines of the training now given at Calicut. We recognize that the facilities for training teachers of commercial subjects will be insufficient for a year or two if Government accept our recommendations to start continuation classes throughout the Presidency and expand this branch of education, and we are agreed that it may be necessary for those controlling such classes and schools, to accept provisionally, teachers whose professional and general educational qualifications may not be altogether adequate. In the case of such teachers and in the case of existing teachers who may not be quite up to date a 'Refresher' course would be desirable at one or other of the four

institutions mentioned above. Admission to the various types of classes, we have recommended, should be restricted to those who are qualified under the rules for admission to the Government Technical Examinations. We do not consider that it is necessary at present or likely to be necessary in the immediate future to provide special facilities for the training of women and girls in commercial subjects as it is open to them to take advantage of existing facilities, whilst the other classes which we have proposed should be established may also be open to women and girls. We consider that it is not necessary to prepare syllabuses of commercial subjects to be taught in secondary schools, the Intermediate or the University classes. The secondary schools have already got a curriculum and the curriculum for the Intermediate and the University classes will be drawn up by the authorities concerned when such classes are instituted. With regard to the continuation classes which we propose should be instituted throughout the Presidency, we consider that as the curriculum will have to be drawn up to suit local conditions it is advisable to leave such syllabuses to be worked out by the heads of the institutions concerned in consultation with the officers of the Department of Public Instruction who will inspect and control these institutions.

Syllabuses.

CHAPTER III.

TECHNICAL EDUCATION.

24. The members of this committee are agreed that technical and higher Technological education, including engineering training, should remain under the control of the departments now concerned. It is further agreed that the College of Engineering at Guindy should be expanded in due course and developed into a technological institute. We consider that research work can be undertaken in the existing laboratories in this Presidency, e.g., in the laboratories of the College of Engineering, Guindy; the Presidency College, Madras; and the Agricultural College at Coimbatore. We think that the local Government should come to some arrangement with the Indian Institute of Science, Bangalore, so that that Institute may be utilized for chemical research as applied to industries. Mr. Cotton has suggested that Rs. 50,000 per annum be provided by the Madras Government towards the maintenance at the Indian Institute of Science of facilities for chemical research on behalf of the Madras Government. The committee unanimously support Mr. Cotton's proposal but consider that research work should as far as possible be undertaken within the Presidency itself with the idea of fostering the spirit of research and developing the resources of our existing institutions. We consider that facilities outside the Presidency should be utilized only when local arrangements are found insufficient.

25. Technical education being post-Matriculate, higher technical education should be developed in existing institutions by providing, if need be, additional courses, and further by the provision in these institutions of facilities for research work as problems arise. We consider that the qualifications for admission into a technical or a technological institute should ordinarily be the Intermediate Standard of the University, but that provision should be made for allowing for exemptions to this rule in the case of persons who have practical training in the professions which they wish to study and who have sufficient general education to profit by the course of instruction provided. Whilst fully realizing the need for the provision of facilities for higher technical education we do not propose any large expenditure on the institution of new technical institutes, and we consider that the training of the rank and file and subordinate supervising staff of the Provincial Industrial Army is of sufficient importance to warrant special attention.

CHAPTER IV.

INDUSTRIAL SCHOOLS.

26. After being bandied about from one department to another the control of industrial education was finally vested in the Department of Industries in 1914 and an Inspector of Industrial Schools was appointed in 1916 to take charge of the educational branch of the department's work. Industrial education in this Presidency, unlike other parts of India, is imparted chiefly by aided institutions. The only examples of Government institutions engaged in this branch of education are the Leather Trades Institute, Washermanpet, the Government Trades School, Madras, and the Government Industrial Institute at Madura and the Textile Institute, Madras. The School of Arts, Madras, which was lately taken over by the Department of Industries also caters for industrial education but is conducted principally as a school of arts and crafts. The Department of Industries assists with grant-in-aid and advice, thirty-nine industrial schools scattered throughout the Presidency. Many of these schools are located in out-of-the-way places and seldom heard of by the general public. As the cost of maintaining the schools falls principally upon Mission funds, it is necessary to obtain orders for the work turned out, the amount of grant-in-aid contributed by Government being comparatively a small portion of the total cost.

27. The members of the Committee are unanimously agreed that industrial schools should remain under the control of the Department of Industries. At present the greater part of the industrial education in the Presidency is provided by Missionary and other charitable institutions. Government should in every way encourage the further development of such efforts, but in addition to the aided schools Government ought, as funds permit, to set up a number of model institutions in areas where aided institutions are few and far between. The Committee observe for example that, with the exception of the small works classes in connexion with the Common-Wealth Trust Engineering Workshops at Mangalore, there are no industrial schools, aided or Government, west of Coimbatore, and that, with the exception of a girls school of needle-work at Bellary and a newly recognized school at Kurnool, little is being done in the direction of industrial education in the Ceded districts whilst in the districts on the East Coast, north of Madras, industrial schools are also scarce. We consider therefore that in the immediate future three model industrial schools should be started by Government and located, one in the Ceded districts, one in the Northern Circars, and one in the West Coast.

28. We are of opinion that the drawing up of curricula for Government and aided industrial institutions can very well be left to the officers of the Department of Industries and the heads of the institutions concerned. With regard to the qualifications for admission, as a general rule, a lower elementary school pass should be regarded as the absolute minimum for admission into full time industrial schools, but while agreeing that the standard of admission to such classes should be kept as high as possible we think that the managers or superintendents should have discretion subject to the approval of inspecting officers of the department, to relax the rules in special cases.

29. The Committee are strongly of opinion that the Government Trades school, Madras, has already demonstrated its usefulness, and should be further developed as funds permit; and that the existing staff should be placed at once on a permanent footing as we consider that the present temporary arrangement which has now been in existence since 1916 is unfair alike to the staff, the students, and the officers of the Department of Industries. We recognize that this type of school is not one which in the peculiar circumstances of industrial development in this Presidency

can profitably be started in many other centres, but we are agreed that when the new South Indian Railway Workshops are opened at Trichinopoly, the opening of another school at Trichinopoly on lines similar to that of the Madras Trades School should be considered. We are further agreed that it is desirable to institute in Madras itself as a branch of the Madras Trades School a preparatory Trades School to take pupils who have completed their primary or middle school course as the case may be, and to give them a three or two years' course of general education heavily biased towards industry, with the idea of providing employers with a better qualified type of lad for recruitment into the works and mills as apprentices and learners. For the present we consider that this preparatory Trades School should be established to cater for about 100 boys when at full strength.

30. We are pleased to note that in addition to the classes in the Trades School, classes have recently been opened in works themselves by two Madras firms, Messrs. P. Orr & Sons and Messrs. Addison & Co., Limited, and by the Common-Wealth Trust in their Engineering works at Mangalore. We consider that such classes, correlating as they do the class work with the practical work of the shops, are an ideal form of industrial education, and we trust that Government will afford every assistance to other firms wishing to institute similar classes for their young workers.

31. The Committee regret very much to find little evidence of any particular interest being taken in industrial education by local and municipal bodies. They are aware that the financial conditions of most of these bodies encourage little hope of improvement in this direction in the immediate future; they observe moreover that several industrial schools are heavily taxed by the local bodies within whose jurisdiction they are situated, whilst others are treated much more leniently. The suggestion has been made that all industrial schools recognised by Government should be exempt from local taxation of all kinds, and to this suggestion we offer our strong support.

32. We are further agreed that local bodies should be encouraged to grant industrial scholarships from local funds, such scholarships being tenable in Government or aided industrial schools in a particular locality or elsewhere. We believe that the necessary funds for this purpose can be found, at all events to a limited extent, if the spirit is willing, and we are further of opinion that the provision of such scholarships would, as a general rule, be a much more suitable arrangement than for local bodies to attempt to conduct industrial schools on their own account. Where local bodies themselves conduct industrial schools, we consider that such schools should be aided by Government on the same lines as other aided institutions.

33. We do not consider that the management of factories and other industrial concerns can reasonably be expected to bear expenditure on industrial education except when such expenditure is in connexion with classes directly connected with the particular workshop or factory concerned and where the curriculum of such classes is prepared with special consideration to the processes or particular work undertaken in that factory or workshop.

34. With regard to the question raised in paragraph 3, sub-paragraph 6 of the Government Order constituting this Committee as to what extent industrial and technical instruction should be imparted in the ordinary schools for general education, we are unable to come to a unanimous decision. One section of the Committee agrees with the opinion of Mr. C. Ramalinga Reddi that 'technical and industrial instruction should be given in all ordinary schools and should be compulsory'; whilst another section considers that 'it should be optional'. A third section of the Committee which includes most of the officials, considers that apart from the type of school suggested as a preparatory trade school at Madras, the instruction provided in ordinary schools for general education should not aim at providing a definite training

in any particular trade or industry. They recognise the great value of manual training in wood, metal, cardboard, or any other suitable medium, as a means of training the hands, eyes and brains of the pupils in ordinary schools, but consider that beyond such manual training the ordinary schools for general education should not attempt to impart any definite industrial training. This section of the Committee are further of the opinion that there should be a distinct gap between manual training as a subject of ordinary education, and industrial or vocational training with the aim of training a pupil for a definite occupation. They consider that it is useless to attempt to train a pupil for a definite occupation on anything less than half-time lines, and that such half-time schools should cater only for weaving and similar reasonably easily acquired trades, whilst carpentry, blacksmithy, fitting and more difficult trades generally, should be catered for only in full-time industrial schools. At the third general meeting held on the 22nd November 1922, the proposition of Mr. S. Arpudawami Udayar, that "the Committee recognises the value of manual training and is also of opinion that vocational and industrial training might with advantage be included in the curriculum of ordinary schools as *optional* subjects", was put to the vote and carried by a majority of eight against five after a considerable amount of discussion. Mr. Cotton, the Director of Industries, who was present at the meeting, dissented very strongly from this resolution, and subsequently submitted a note on the subject which is appended to this report as annexure I.

35. The questions relating to weaving schools were considered separately but our recommendations with regard to industrial schools in general may be taken to cover this branch of industrial school education also. We consider that admission to the higher courses of study in the Government Textile Institute, Madras, should ordinarily be restricted to those who have completed the Lower Secondary School course, but that exceptions should be made in the case of those who have not reached that standard provided they satisfy the Superintendent that they are in a position to benefit by the training provided. In the case of the lower courses at this institution and in the other industrial schools where weaving is taught, admission should, as a general rule, be restricted to those who have completed their Lower Elementary School course.

CHAPTER V.

INDUSTRIAL WORK FOR WOMEN AND GIRLS.

36. For the consideration of this subject, the General Committee decided to co-opt three ladies to form, with Mr. Ramalinga Reddi, a sub-committee. This Sub-Committee met at the office of the Director of Industries on the 20th November, the members being Miss B. M. Tweddle of the Wesleyan Mission, *Ikkadu* (convenor), Mrs. Subbarayan and Mrs. Devadoss. In the absence of Mr. Ramalinga Reddi, the Secretary attended the committee meeting to furnish any information which the ladies might require. The thanks of the General Committee are due to these ladies for the exceedingly businesslike way in which they handled the subject.

37. On the information before them, and assisted by the report of the sub-committee referred to above, the General Committee are agreed that any organisation for the provision of technical and industrial education for women and girls should be under the control of the Department of Industries. The Committee regard the following industries as suitable for women and girls:—

'Spinning and weaving', 'lace making', 'embroidery', 'drawn thread work', 'plain needlework', 'mat-making', 'basket-making', 'knitting (hosiery)', 'leather modelling', 'book-binding', 'toy making', 'button making', 'crochet work' and 'domestic economy (specially fine laundry work)'.

38. We consider that special preference should be given to cottage industries. We are further of opinion that for the provision of instruction in the subjects enumerated above the existing school-cum-factory type of institution is most suitable. Such institutions should, we consider, act as central depots for the training of recruits, and in large areas like Madras sub-agencies or subordinate depots should be instituted. The work of selling the products should be entrusted to one central body preferably at Madras, which central body or central agency should also undertake the buying of the raw materials in bulk for distribution to the various mission or other institutions catering for these particular industries. For this particular purpose, the Victoria Technical Institute at Madras might very well be developed with assistance from Government, and its activities co-ordinated with the efforts of the Department of Industries. We are agreed that after being trained at the Central depot or subordinate depots, the recruits should be employed under proper supervision at the depots themselves, or if they prefer it, and if the nature of the work undertaken is suitable, they should be allowed to work in their own homes on piece-work rates. We believe that for the proper development of cottage industries for women and girls, the central depot should be in a position to develop an extensive export trade in certain of the products manufactured. The Sub-Committee recommend and this Committee agrees that the teaching staff at the central and sub-depots should exclusively be ladies. We are agreed that it is not desirable at present at all events to draw up a curriculum of studies for these depots or for the various mission and other institutions acting at present as central buying and distributing agencies for groups of cottage workers. This task may very well be left to the heads of the institutions concerned assisted by the officers of the Department of Industries. We understand that proposals have been submitted to Government for strengthening the education section of the Department of Industries by the recruitment of a lady specially qualified in women's work to undertake under the direct supervision of the Inspector of Industrial Schools the inspection of girls' industrial schools, and generally to assist in developing industries for women and girls throughout the presidency and we support the proposal. We are further agreed that it is not desirable to lay down any fixed educational qualifications for

admission to training in industries for women and girls, but the pupils should have sufficiently general education and be sufficiently intelligent to benefit by the type of instruction provided. Further the subjects enumerated above as suitable for women and girls are also suitable for inclusion in the curriculum of elementary and secondary girls' schools under the head of 'domestic economy'.

39. With regard to the provision of suitable teachers for women's work, we consider that wherever possible the pupil teachers system should be adopted and

where the number of pupil teachers in one institution is more than six, that special facilities should be provided for giving them instruction in methods of teaching on modern lines.

40. We are informed that the raw material used in several of the industries enumerated above, particularly lace thread (linen) is subject to a heavy import tax.

Tax on raw material.

The general committee accepts the recommendation of the ladies sub-committee that representations should be made to relieve the women's industries of this burden. We are of opinion that the amount of customs revenue likely to be lost is inconsiderable and we understand that there are sufficient precedents for such discrimination in respect of articles which India does not produce and which are the raw materials from which articles on the export list are manufactured. Mr. C. Ramalinga Reddi dissents strongly from this view on the ground that it is a matter of imperial policy which has to be considered from other points of view.

CHAPTER VI.

SCHOLARSHIPS.

41. The existing scholarships provided by the Department of Industries may be enumerated as follows:—

State Technical Scholarships.—The number of scholarships tenable in Europe at any one time has been fixed at 8*—value £200 plus 25 per cent present facilities.

bonus. A copy of the rules governing the conditions of award as last amended by the Government of India in consultation with the High Commissioner for India at London is attached.† Of the eight scholarships, four are now held in the United Kingdom, and two have recently fallen vacant. Applications for these vacancies are being dealt with by Government. Of the remaining two scholarships, the recipient of one has recently sailed for England while the second has been cancelled as the High Commissioner for India was unfortunately quite unsuccessful in his efforts to arrange for his training in England. Recommendations with regard to the filling of this vacancy have also been submitted to Government. The following table exhibits the number of scholarships that have been awarded since 1906 for the study of different industrial subjects. This table excludes the three scholarships that are now vacant and the scholarship the recipient of which has not yet actually begun to undergo training.

Subject for the study of which awarded.	Number of scholarships that have so far been awarded.
(1) Leather Industry	4
(2) Textile Chemistry as applied to dyeing, bleaching, finishing and printing of textile fabrics.	1
(3) Chemistry of soap-making and the use of native oils	1
(4) Metallurgy	2
(5) Weaving and textile manufacture	4
(6) Electrical engineering (including hydro-electrical engineering)	4
(7) Locomotive engineering (including hydro-electrical engineering).	1

42. *Scholarships tenable at the Indian Institute of Science, Bangalore (first instituted in 1919)*—*Object.*—To provide adequate facilities for the technical training of well-educated young men of the presidency for employment in Chemical Industries, to meet the demand for trained industrial chemists.

Number that can be held at any one time.—Fifteen—value of Rs. 60 per mensem. Travelling allowance paid when joining and leaving at the commencement and conclusion of course respectively.

Departments in which scholarships are tenable—

- (1) Department of Applied Chemistry.
- (2) Department of Bio-Chemistry.
- (3) Department of Electro-Technology.

(a) *Condition of award.*—Scholarships are normally tenable for two years but may be terminated at the end of the first year and in special cases may be extended for a third year on the recommendations of the Senate of the Institute. Preference is given to men with post-graduate training and honours graduates. Selected scholars must reside in the hostel attached to the Institute. Scholarships are liable to discontinuance at any time in the event of the director receiving adverse reports regarding a scholar's progress or conduct.

(b) *Number of scholarships that has so far been awarded.*—Including the nominations made during the current year, the number of scholarships that have been awarded since the inception of the scheme in 1919 is eighteen. Ten of these scholars are now undergoing their course in the Institute and the rest have after varying periods of stay been allowed to resign in order to enable them to take up such suitable appointments as were offered them.

* Prior to 1920 the number was only 4. In this year the Local Government on the recommendations of the Finance Committee of 1919 added 4 more. Thus the number of scholarships available to natives of this presidency now remains at 8.

† Annexure II.

43. *Scholarships tenable at the Victoria Jubilee Technical Institute, Bombay—*
Object.—To provide facilities for students of this Presidency to undergo technical training in an existing and well-equipped institute in India, first instituted in 1914.

Number of scholarships available for award every year.—Six—value Rs. 60 per mensem. Travelling allowance paid when joining and leaving at the commencement and conclusion of the course respectively.

Minimum qualifications required of applications.—Possession of Secondary School-Leaving Certificates.

Period of course.—Four years.

Subjects for the study of which the scholarships are awardable:—

- (1) Technical and Applied Chemistry.
- (2) Sanitary Engineering and Plumbing.
- (3) Textile Manufacture.

Before 1918 these scholarships were also awarded for the study of Mechanical and Electrical Engineering.

(a) *Conditions of award.*—Selected candidates should pass the entrance examination held at the Institute. They will be required to produce satisfactory evidence of the consent of the father or guardian to proceed to Bombay, of good character, and of physical fitness to undergo the course of life that will have to be followed. Holders of scholarships will not be bound by any engagement to serve Government on the completion of their course nor will the Government be bound to employ them. Each holder will be required to find sureties to execute an agreement for Rs. 2,800.

(b) The following table shows the number of scholarships that have been awarded since 1918, the number who have completed their training and the number who are now in the Institute. This statement includes the scholarships awarded this year.

Number of scholarships awarded since 1918.	Number of recipients who have completed their training.	Number of students who are in the Institute.
10	2	8

The subjects for the study of which they have been awarded are as follows:—

(1) Textile Manufacture	6
(2) Technical and applied Chemistry	2
(3) Sanitary Engineering and Plumbing	2

44. *Industrial School scholarships.*—A copy of the printed notification which gives full particulars about these scholarships is appended to this report (Annexure III).

Recommendations.

45. *State Technical scholarships.*—The committee are of opinion that the number of scholarships tenable in Europe at any time should be raised from 8 to 10, if duly qualified candidates are forthcoming but they would deprecate any lowering of the standards of eligibility merely in order to fill the additional places now proposed.

(a) In view of the difficulties experienced in obtaining facilities for study in the United Kingdom, the committee are of opinion that the Local Government should in consultation with the High Commissioner explore the possibility of sending candidates occasionally to the Continent or America if proper arrangements could be made through the agency of His Britannic Majesty's Diplomatic or Consular Service for the supervision of the students enjoying the scholarships and if the language difficulty on the Continent can be overcome. Advantage might perhaps be taken of the present favourable atmosphere in Germany towards Indian students, to secure admission into technological institutes, or into industrial concerns themselves, in that country.

(b) A record should be maintained showing as far as possible the subsequent career of every scholarship-holder.

46. *Scholarships at the Indian Institute of Science.*—The committee do not consider that any increase in the number of scholarships tenable at this institute is necessary at the present time but they are of opinion that having regard to the greater prospects of employment for students working to a prescribed syllabus, at least two scholarships should be earmarked every year hereafter for candidates who offer themselves for the study of Electrical Technology. The committee see no reason why bonds should not be required from scholarship-holders at the Indian Institute of Science as are required from scholarship-holders at the Victoria Jubilee Technical Institute, Bombay.

47. *Scholarships at the Victoria Jubilee Technical Institute.*—The committee are of opinion that the maximum number of scholarships to be held at this institute at any one time should be fixed at twenty and they consider that Electrical Engineering should be added to the list of subjects for the study of which scholarships may be awarded.

With regard to the scholarships tenable both at the Victoria Jubilee Technical Institute and the Indian Institute of Science, the committee are of opinion that the Department of Industries might indulge in a little more publicity as to the facilities which exist for training at these institutions, by sending scholarship prospectuses to the heads of all secondary schools in the Presidency to be posted up in a prominent place on their notice boards.

48. *Industrial Schools scholarships.*—The committee have no alterations to suggest either in the amount or in the number of scholarships at present awarded in Aided Industrial Schools.

49. *Extra scholarships.*—The committee are agreed that in addition to the scholarships enumerated above it is desirable to institute scholarships tenable at Serampore Weaving Institute and at Sibpur Engineering College and consider that for the present two scholarships every year should be made available at Serampore and one at Sibpur. These scholarships should be of the same value and on the same conditions as those at present tenable in the Victoria Jubilee Technical Institute, Bombay. We recommend also if suitable candidates are available, that one scholarship be granted every year, tenable in the Ceramic branch of the Sir J. J. School of Art, Bombay, of the same value and on the same conditions as those suggested for Serampore and Sibpur.

50. With a view to provide for specially deserving cases not covered by any of the scholarships enumerated above, we consider that it is desirable that a sum of Rs. 3,000 should be provided annually in the budget of the Department of Industries for 'unforeseen expenditure under scholarships' not directly falling under any of the foregoing heads. We are agreed that scholarships provided from Madras Provincial Funds should not be awarded to subjects of Native States adjoining the Madras Presidency.

CHAPTER VII.

TRAINING OF TEACHERS.

51. We have already dealt with the Training of Teachers for commercial subject in the chapter dealing with "Commercial Education".

With regard to the training of teachers in technical and industrial subjects we consider that the regulations governing the issue of certificates for technical and industrial teachers are at present unsatisfactory in that they lay down no general educational qualifications as a condition precedent to the grant of a certificate, and do not connote any actual practical training. We think that as far as possible arrangements should be made for the training of such teachers in methods of teaching, prior to the issue of a certificate, in schools recognised by the Director of Public Instruction or by the Director of Industries as the case may be, as fit to receive and train such student-teachers. Those admitted to training should be regarded as pupil-teachers and the length and nature of the course given to them settled by the head of the department concerned in each case. We believe that it is desirable to give candidates in such schools some stipend for the period of their training and to make the schools a capitation grant to cover the cost of such training. We consider that the starting of separate training schools for teachers of industrial and technical subjects, whilst doubtless desirable, cannot be recommended at present at all events for financial reasons. These suggestions, if adopted, may involve the giving up of the examinations for teachers' certificates which are referred to in rules 158 to 162 of the Madras Educational rules but we see no great objection to the disappearance of these examinations although we recognise that it will not be possible to discontinue them immediately. If our recommendations are accepted, the Government Technical Teachers' certificate examinations will ultimately be superseded by a system of certificates granted to student-teachers on the joint result of their pupil-teachers' course and of 18 months' or two years' approved service subsequent to leaving the school in which they were trained.

52. In this connexion the attention of the committees was drawn to the training section attached to St. Joseph's industrial school of cabinet-making at Tindivanam which takes in young men who have passed the advanced cabinet-makers' examination, or can satisfy the Inspector of Industrial Schools that they have sufficient practical knowledge of the trade, and gives them a further two years' full-time course of training designed to qualify them as teachers of that subject. This section has proved very successful and has turned out a number of well-qualified teachers of cabinet-making at a comparatively low cost to the State. We are of opinion that the supply of trained teachers of cabinet-making is likely to be sufficient for the immediate future but that the facilities at Tindivanam can be developed or duplicated elsewhere to handle a much greater number, should there be a demand for men so trained. We consider, however, that teachers for lace and embroidery schools and for women's work generally, are likely to be required in greater numbers in the near future and we recommend that wherever a school of women's work is sufficiently developed to allow of the pupil-teacher system being adopted, arrangements should if possible be made to train a supply of teachers for women's work generally. Where only two or three pupil teachers are entertained in a school, we realize that it will be difficult to make special provision for their training in methods of teaching and that much will depend on the goodwill and common-sense of the superintendent concerned, but where the number of pupil teachers in one school is six or more, special arrangements should be made to give them a more elaborate course of training, particularly in methods of teaching and design. We realize that it will be necessary for those controlling industrial schools to accept provisionally for the next few years, a few teachers whose professional and general educational qualifications may not be altogether adequate. For the benefit of such teachers we consider that a system of short courses held at different parts of the Presidency would be very beneficial as a means of bridging the gap between the present untrained teacher and the fully-trained candidates we hope to secure in the future for this branch of the teaching profession.

CHAPTER VIII.

APPRENTICESHIPS.

53. With regard to the question of apprenticeships the sub-committee appointed had the advantage of a considerable amount of evidence both written and oral. A note on the subject was addressed by the Secretary to various managers and superintendents of engineering and other workshops in the Presidency where apprentices are or might be employed, and as a result of this circular much valuable information was submitted by the different gentlemen addressed. At the first sub-committee meeting, Mr. W. H. Lockley, General Manager of the Reliance Engineering Works, attended in person on the invitation of Mr. Ibrahim Sait, a member of the sub-committee and director of the works. At the second sub-committee meeting Mr. W. O. Wright of Messrs. Parry & Co., Madras, attended to give his views in person.

(a) In this Presidency, in the engineering trade in particular, the apprenticeship system seems to be already fairly fully developed. Apprentices are entertained in several large Engineering Workshops in Madras, in the Railway Workshops at Perambur and in the Public Works Department Workshops at Washermanpet and Dowlaishwaram. The students of the various aided industrial schools scattered throughout the Presidency are also for all practical purposes apprentices under training. In some trades, particularly in the printing trade, the apprenticeship system does not seem to have been developed to any appreciable extent and a rather haphazard method of training the young workmen seems to be still in force. It is only fair at this stage to mention that Messrs. Addison & Co., Madras, have recently taken this matter up with the Department of Industries and have established a works school in connexion with their press to see what can be done to improve the present type of apprentice or learner. At the time of the Great War, employers in Madras and in the Presidency generally complained very bitterly that it was almost useless to take on Indian lads as apprentices, as the Indian parents seem to attach little value to such apprenticeships and to exercise no restraint on the apprentice if he wished to discontinue his training. It is customary for lads working in the engineering trade, for example, to enter workshops as boy coolies assisting the older workmen and to pick up a certain amount of manual dexterity in handling the various tools of the trade in which they assist. As they gain strength experience and dexterity they are paid an increasing rate of wages by the employer; but these coolie boys are not apprentices in the ordinary sense of the work. They are paid a few annas a day; they pick up knowledge as they can, and they are constantly moving from shop to shop in an attempt to obtain a slight increase in their day's wages. Their training is entirely haphazard and many of them finish up as very indifferently-trained workmen. A few on the other hand become very skilled workmen, generally in one particular process or in handling one particular machine. In the Railway Workshops and in the Public Works Department Workshops and in a few of the Engineering shops in Madras, youths of a fairly good standard of education are entertained as apprentices generally on five years' agreements. These lads are apprentices in the proper sense of the work. They and their guardians sign agreements that the lads will complete the regular course of training, whilst the employers on the other hand undertake to teach them the trade concerned. A fair number of these young men are Anglo-Indians, but an increasing number of Indians are coming forward to take advantage of this type of training. In the Public Works Department Workshops, most, if not all, of the apprentices are Indian youths of a reasonably good standard of education. The difficulty with these lads arises generally immediately their apprenticeship is finished. As a class, they seem to imagine that during their five years' apprenticeship they have learned practically all there is to learn of their trade and, generally speaking, they look for pay and prospects far in excess of their actual market value. Some of them find difficulty in securing posts immediately their apprenticeships are finished and they and their parents are sometimes inclined to adopt a disappointed attitude

in connexion with apprenticeships in general. In the printing trade, so far as the information available shows, only the coolie boy type of apprentice or learner is entertained. The well-educated youth does not appear to take to printing or book-binding or any of these allied trades in sufficiently systematic a manner to warrant the employer putting him on a level with the apprentice who signs a five years' agreement to serve in an Engineering workshop.

54. The law on the subject of apprentices is contained, so far as this Presidency is concerned, in the Apprenticeship India Act of 1856. This Act appears to have been designed principally to bind children brought up by public charity to learn trades and crafts by which they might earn their living when they reached full age. Apparently the Act was originally intended to apply chiefly to European orphans taken from military and other orphanages. The Act may have been of some use at one time, but in its present form it appears to be of little value to the modern employer of labour or to the apprentice, whether he be of the poorly-educated coolie boy type or the better-educated youth who is at present prepared to sign apprenticeship indentures. The Act seems to contemplate that the employer shall become for all practical purposes the apprentice's guardian, that he shall lodge and board the apprentices with his own family, provide him with food, clothes, lodging, washing, etc. The weakness of the Act seems to lie in the fact that no penalty is provided for third parties employing run-away apprentices. Apparently a run-away apprentice can be arrested and brought back to his employer; but no action seems possible against parties who may entice such an apprentice away from his rightful master.

55. Some of the engineering firms in the Presidency do not consider that fresh legislation is necessary on this subject and Mr. Lockley of the Reliance Engineering Works stated that he was not aware until he received the Secretary's communication that there was an Apprenticeship Act in existence. He expressed the opinion that lads of fair education, Indian or Anglo-Indian, would, as a general rule, carry out the letter and spirit of any agreement which they had entered into. For the ordinary artizan type he personally found it more convenient to accept in his works, as far as possible, only the sons and relatives of his workmen, on the understanding that they would serve for at least three years before leaving the firm. In the case of these lads he demanded a deposit of Rs. 25 which was forfeited if the lads left the works without notice and without his consent. He said that the system worked reasonably well and that any fresh legislation on the subject should be in the direction of providing a better-educated type of youth for recruitment into works as apprentices or learners. He further expressed the opinion that much of the bitterness of a few years ago in the minds of Madras employers regarding their apprentices and young workmen leaving them without notice was caused by the condition arising out of the Great War. Government at that time were recruiting large numbers of workmen for services overseas, and employers in this Presidency suffered very much on that account. Now that normal conditions have been more or less attained, the conditions leading up to that complaint have been considerably modified if not altogether removed, and so far as the engineering trade is concerned Mr. Lockley at all events does not consider that any legislation is necessary.

56. From the evidence before us, both written and oral, the members of this committee are of opinion that it is very desirable to institute a system of apprenticeships in those trades where no such system at present exists; where more or less a haphazard system of apprenticeships exist something should be done to regularise such systems and to put them on a proper footing. The present Apprenticeship Act is altogether useless, but an Apprenticeship Act of some sort is very desirable. We recommend that the present Act should be remodelled to provide for the binding of apprentices to serve their employers whilst living with their natural parents or guardians. We consider that the employer should be bound to teach the apprentices his trade but should not necessarily be expected to feed and clothe or house him. We are further agreed that it is desirable that the remodelled Act should provide severe penalties for persons knowingly enticing away a bound apprentice or knowingly employing a bound apprentice without the consent of his previous employer.

CHAPTER IX.

FINANCE.

57. Financial aspects involved in the recommendations of this committee.

Commercial Education.—To carry out the suggestions of the committee as detailed in the chapter on Commercial Education we believe that it will be necessary to provide for the following items:—

(1) On raising the present institute of Commerce, Madras, to University grade, a capital expenditure of Rs. 1,50,000 and a recurring expenditure of Rs. 60,000 against which we estimate that there will be a set-off of about Rs. 30,000 received as fees, bringing the net expenditure per annum down to Rs. 30,000.

(2) On raising the School of Commerce at Calicut to the Intermediate grade, we recommend an expenditure of Rs. 5,000 for non-recurring expenditure spread over three years and principally devoted to bringing the Library up to date, and a recurring expenditure of about Rs. 25,000 per annum, this being Rs. 10,000 in excess of the present annual expenditure. In this connexion we suggest, however, that it might be possible to organize this institution at Calicut to be run in conjunction with the Zamorin's College, Calicut; in which case we believe, the recurring expenditure could be reduced to Rs. 20,000 per annum.

(3) For the two new Schools of Commerce, one in the north and one in the south of the Presidency, we consider that it will be necessary to provide Rs. 50,000 for each for non-recurring expenditure and Rs. 20,000 per annum for recurring expenditure; but we recommend that these two institutions should in the first instance be started in rented buildings and expenditure on buildings incurred only after the schools appear to have justified their continuance.

(4) For grant-in-aid to continuation classes which we have recommended should be instituted in commercial subjects, it will be necessary to provide for teaching grant Rs. 10,000 increasing by Rs. 1,000 annually up to a maximum of Rs. 20,000 and for equipment (half grants) Rs. 10,000 the first year, to be followed by Rs. 2,000 per annum for the next ten years.

58. *Technical Education.*—With regard to Technical Education which we have recommended should remain under the departments now concerned, we do not feel competent to frame a definite budget. We have recommended that the College of Engineering, Madras, should be developed into a Technological Institute. We have further recommended that the existing laboratories in this Presidency, for example, those of the College of Engineering, Guindy, College of Agriculture, Coimbatore, and the Presidency College, Madras, might be used for research work. These suggestions, if accepted, will necessitate some augmentation of the budgets of the departments concerned and we can only suggest that Government call for proposals from the heads of these departments as to the amount of funds which should be provided. We have further recommended that the Indian Institute of Science might under suitable arrangements be used for chemical research work as applied to industries. We have accepted Mr. Cotton's suggestion that Rs. 50,000 per annum should be provided by the Madras Government towards the maintenance at the Indian Institute of Science of facilities for chemical research on behalf of the Madras Government. We thus propose for Technical Education a definite expenditure of Rs. 50,000 per annum, plus the amount required to carry out our suggestions with regard to the College of Engineering, Madras, and the various laboratories attached to the other colleges in the Presidency.

59. *Scholarships.*—The statement given below shows the sum now expended through the Department of Industries on Technical and Industrial Scholarships and the amount it will be necessary to provide if our recommendations with regard to

scholarships are accepted. It will be observed that the present expenditure is Rs. 70,560 per annum which we propose should be increased to Rs. 86,520 per annum.

As at present.	RS.	As proposed.	RS.
1. Eight State Technical Scholarships at £240 each (240 × 8 × 15) ...	28,800	1. Ten State Technical Scholarships at £240 each (240 × 10 × 15) ...	36,000
2. Fifteen scholarships in all tenable at any one time at the Indian Institute of Science, Bangalore (15 × 60 × 12) ...	10,800	2. No change ...	10,800
3. Twenty-four scholarships in all tenable at any one time at the Victoria Jubilee Technical Institute, Bombay (four years' course; six scholarships per annum) ...	17,280	3. Twenty scholarships tenable at any one time at the Victoria Jubilee Technical Institute, Bombay ...	14,400
4. Industrial School Scholarships (total 300, value ranging from Rs. 1-8-0 to Rs. 7-8-0) per mensem ...	13,680	4. No change ...	13,680
		5. Six scholarships tenable at the Serampore Weaving Institute (three years' course; two scholarships per year) ...	4,320
		6. Two scholarships tenable at the Engineering College, Sibpur (full course two years; one scholarship every year) ...	1,440
		7. Four scholarships tenable at Sir J. J. School of Arts, Bombay (four years' course; one scholarship per annum) ...	2,880
		8. Lump provision for scholarships to be awarded by the Director of Industries ...	3,000
Total ...	70,560	Total ...	86,520

60. *Industrial schools.*—For all practical purposes we consider that the aided institutions concerned with 'women's work' and 'weaving' can well be bracketted along with ordinary industrial schools. We are unanimously agreed that the budget under the head 'grant-in-aid to Industrial Schools' has so far as the current financial year is concerned been cut down below starvation point and that a considerably increased budget will be necessary if all the aided schools contemplated are to be started and developed. There are, at present, 39 aided schools under the control of the Department of Industries whilst the allotment for grant-in-aid for the current year is only Rs. 60,000 (lately increased by reappropriation to Rs. 63,000). We observe that two schools in Madras, the Chengalvaraya Naicker's Technical Institute, Vepery, and the Madras Anjuman Industrial School, between them, absorb Rs. 14,000 of this allotment, and that the grant-in-aid to the first named institution is likely to be still further augmented in the near future, which leaves comparatively little for distribution amongst the other 37 aided schools scattered throughout the Presidency. We have given considerable attention to this question of grant-in-aid to industrial schools, and are agreed that if this branch of industrial education is to be developed, it will be necessary to budget for something approaching the following figures:—

Grant-in-aid to Industrial Schools.			RS.
Teaching, 1 lakh; increasing by ...	...	...	15,000 per annum.
Building ($\frac{1}{2}$ grant) ...	...	...	50,000 "
* Building, special ...	...	...	20,000 "
Equipment ($\frac{1}{2}$ grant) ...	...	...	40,000 "
* Equipment, special ...	...	...	10,000 "

* Two-thirds or full grant in special cases.

61. *Government Institutions.*—The Government institutions with which we are, at present, concerned are the Leather Trades School, School of Arts, Madura Industrial Institute, the Textile Institute, the Madras Trades School and the new Government Industrial Schools which, it is proposed, should be started in different parts of the Presidency.

62. *Leather Trades School.*—With regard to the Leather Trades School, the recurring expenditure for 1921-22 was slightly under Rs. 69,000, but these figures include a considerable amount spent on equipment. A scheme is, at present, before Government to provide extra accommodation for this institute. The new buildings included in that scheme, will, it is understood, contain laboratories for the use of the Industrial Chemist at headquarters. The buildings and equipment are estimated to cost about Rs. 1,53,000. Recurring expenditure for the next ten years may reasonably be expected to amount to something under Rs. 65,000 per annum. The committee understand that a separate committee has been appointed by Government to consider the future of this institutions and suggest that it may be advisable, pending the report of that special committee, to treat the figures given above as merely approximate.

63. *School of Arts.*—The School of Arts, during 1921-22, cost a little over Rs. 82,000. An average budget of one lakh of rupees may, the committee consider, be provided for this institution for the next ten years for recurring expenditure. The future development of this institution has also been considered by another special committee, and until the report of that committee is published it will be necessary to treat these figures also as merely approximate.

64. *Madura Industrial Institute.*—The committee consider that an average expenditure of about one lakh of rupees per annum may be provided for this institution for the next ten years, whilst we further consider that Rs. 30,000 per annum can very well be spent on equipment each year for the next three years. Against these figures there will be a set off of the amount received for sales and work done. For 1921-22, when the institute was not at full strength the receipts were Rs. 24,804-4-7 and this figure may be expected to increase considerably when the institute is at full strength.

65. *Textile Institute.*—The Textile Institute is, at present, simply a small experiment in a rented building costing about Rs. 20,000 per annum. A scheme prepared by Mr. Amalsad for a permanent institute contemplates a new building costing about two lakhs with equipment costing about one lakh and a recurring cost of Rs. 50,000 per annum. These figures were subjected to a fair amount of scrutiny and Mr. Amalsad attended the fourth general meeting of the committee in order to furnish any information required. After a fair amount of discussion we agreed to accept these figures and to recommend that Government provide for this amount in their calculations for the development of the Textile industry in the Presidency.

66. *Madras Trades School.*—The Madras Trades School is also conducted in a rented building and costs something under Rs. 50,000 per annum. The new buildings, at present being erected, are expected to cost about four lakhs of rupees in all. When the new buildings are finished the recurring cost will amount to, for the Trades School classes, about Rs. 85,000 per annum, and for the Preparatory Trades School attached about Rs. 15,000 per annum, or in round figures about one lakh of rupees per annum for recurring expenditure for the next ten years.

67. *New Government Institutions.*—With regard to the new Government Institutions which we have recommended should be started in the Ceded Districts, Northern Circars, and on the West Coast, we consider that it will be sufficient to allow for non-recurring expenditure on lands, buildings and equipment Rs. 1,40,000 per annum for the next ten years and for recurring cost Rs. 50,000 per annum to be increased by Rs. 50,000 every second year, that is to say, we contemplate the establishment of one school every second year, the non-recurring cost amounting to Rs. 2,80,000 for each school, and the recurring cost Rs. 50,000 per annum for each school. We recommend, however, that every effort should be made to find suitable buildings already available. If suitable buildings can be found available we think that the programme should be accelerated and savings on buildings utilized to start the schools more quickly than one every two years.

68. *Miscellaneous.*—With regard to certain suggestions we have made for the inclusion of women's work in ordinary girls' schools under the head "domestic economy" we do not feel competent to frame the necessary budget and consider that it will be sufficient if we recommend to Government that the heads of departments concerned be asked to formulate definite proposals. Similarly, with regard to the Central Women's Industrial Depot at Madras, referred to in paragraph 38 of this report, we find it difficult to frame definite financial proposals. We understand that proposals for the reorganization of the work of the Ladies Committee of the Victoria

Technical Institute and for the co-ordination of the activities of that committee with the efforts of the Department of Industries are, at present, under correspondence. Until these proposals have been threshed out, it will be difficult to frame a budget and we consider that the framing of that budget may very well be left in the hands of the Director of Industries.

69. *Control.*—At present the control of aided industrial schools and Government Industrial Schools is vested in the Director of Industries assisted by an Inspector of industrial Schools. If all our recommendations are accepted, it may be found necessary to strengthen the present staff of the Department of Industries. It has been suggested, for example, that a lady assistant might be appointed to work under the orders of the Inspector of Industrial Schools, to relieve him of the inspection work connected with the girls' industrial schools, to act perhaps as Secretary to the Women's Work Committee of the Victoria Technical Institute, and generally to assist in the control and development of cottage industries for women in this Presidency. Should this suggestion be accepted, it will be necessary to provide funds for the salary of the lady assistant. Similarly, it may be found necessary, as developments proceed, to appoint one or more Assistant Inspectors of Industrial Schools or to raise the status of the Inspector of Industrial Schools to that of a Deputy Director of Industries. We notice that the post of Inspector of Industrial Schools is not included in any of the regular services and that the pay and prospects of the post have not been revised since the post was first created in 1912-13. We consider that the duties appertaining to this post are as important and involve as high a degree of special training as those of the ordinary Inspector of Schools, and we are agreed that the Inspector of Industrial Schools has every reason to expect to be treated, so far as pay and prospects are concerned, on as favourable terms as his colleagues in the Department of Public Instruction. We make no definite recommendations that this post should be included in any of the regular services but we consider that the arguments which led to the revision of the pay and prospects of posts in the regular services apply equally to this particular post and we believe that the matter has only to be brought to the notice of the Government to ensure that this appointment shall be placed on the same footing as similar appointments in other departments.

70. In conclusion, the committee would like to put on record its thanks to Mr. Fyfe who acted as Secretary of the committee and who was always ready to give any help which any of the members required. He is also very largely responsible for the final form of the report.

M. E. COUCHMAN
Md. SADULLA BADSHA
R. G. GRIEVE
E. F. THOMAS
P. SUBBARAYAN
VICTOR THRILL
C. R. REDDY
Y. RANGANAYAKULU
A. SUBBARAYALU
L. K. TULASIRAM (*subject to a minute of dissent*)*
B. ROTTSCHAFER
P. TYAGARAYA CHETTI
C. L. CARTWRIGHT
W. FYFE
D. M. AMALSAID
M. KRISHNAN NAIR
S. ARPUDASWAMI UDAYAR
R. T. KESAVULU
T. C. SRINIVASAN
H. M. IBRAHIM SAIT
M. K. DANDEKAR
M. A. WALKER

ANNEXURE I.

Note submitted by Mr. C. W. E. Cotton prior to his departure on leave.

I greatly regret that I shall be out of India when the report of the Committee on Industrial and Technical education is drafted. Generally the views adopted by the majority of the committee in considering the reports of the sub-committees are in consonance with my views, but I take very strong exception to the decision come to yesterday on the subject of vocational training in ordinary schools. As I said at the meeting it seems to me that in the case of intelligent boys with purely literary inclinations it is unfair to handicap them by requiring them to devote two hours out of each school day in learning a smattering of carpentry or blacksmithy or even weaving and the suggestion that such training will make them industrially minded is a very large assumption. As regards boys who have little or no aptitude for books and are not likely even if persevered with to get beyond the S.S.L.C. stage I am all in favour of their aptitude for industrial work being tested as early as possible but not in the manner proposed. They should be drafted into whole-time industrial schools and given an opportunity therein to show whether they have any bent for working with their hands. Where a boy has such a bent, it is a positive unkindness to give him industrial education in such small doses as the vocational course postulates and the time lost may seriously prejudice him later on when he wishes to take up industrial work in earnest. I do not wish to stress the point about the diversion of money which ought to be spent by the Department of Industries to finance the schemes of well-meaning idealists who are trying to mix oil and water. Vocational classes involve a lot of expenditure on plant, materials and staff. If a particular school desires to open such classes, they must make attendance compulsory or the teachers may lecture to empty benches but if there is another school in the same locality where all efforts are concentrated on the ordinary curriculum, all the boys of average and more than average intelligence are likely to desert the vocational class school in a body because they apprehend that their prospects of obtaining a literary degree may be prejudiced by stranding on industrial training. The voting taken yesterday on Mr. Arpudaswami Udayar's amendment was very instructive. All those who have a practical acquaintance with industrial education and are cognizant of the difficulties of imparting instruction on industrial subjects and the time it takes to get the necessary manual dexterity, particularly in carpentry absolutely refused to coquet with the proposal even though it was watered down by the substitution of optional for compulsory classes. I think that the antipathy of the higher classes towards any form of work is largely disappearing. The Non-Brahman movement has *inter alia* contributed to this, by bringing it home to Brahman parents that their sons are not likely in the future to command such a high percentage as formerly of clerical posts in Government service. And for such antipathy as still persists, vocational training is unlikely to prove a satisfactory purge. An increase in the number of whole-time industrial schools in suitable centres is the more correct and a not more expensive way of tackling the problem.

* In spite of reminders Mr. Tulasiram has not submitted his minute of dissent.

ANNEXURE II.

STATE TECHNICAL SCHOLARSHIPS.

GENERAL AND SPECIAL RULES GOVERNING THE GRANT OF
STATE SCHOLARSHIPS.

GENERAL RULES.

(i) Candidates must produce medical evidence of physical fitness to undergo a course of study abroad.

(ii) Except in the case of State university and technical scholarships for which (subject in the former case to the approval of the Governments of India, Madras, Bombay or Bengal) the Universities and local Governments and Administrations, respectively, make their own selection, each local Government is invited to nominate annually a candidate or candidates, as the case may be, and the Government of India select from among those nominated the candidates who appear to them the best fitted to hold the scholarships. For technical scholarships no candidate is to be selected by local Governments on the result of a competitive examination either open or limited.

(iii) Save in the case of university scholars selected by the Governments of Madras, Bombay and Bengal, and of technical scholars, full details including the name and occupation of the scholar's father and place of birth, a summary of his academic career in India, and a statement of the course of study proposed to be followed in the United Kingdom, should be furnished for transmission, to the Office of the High Commissioner for India some time before the scholar's arrival in England.

(iv) When nominating candidates already resident in the United Kingdom, local Governments should give the earliest possible intimation to the Government of India regarding the qualifications of such candidates, the course of study they propose to pursue and their address in the United Kingdom. The Government of India will then communicate these particulars to the High Commissioner, and will await a reply from him before selecting the scholars. The Government of India will transmit to local Governments the views or instructions received from the High Commissioner at the earliest possible date and, if necessary, by telegram.

(v) Difficulties sometimes arise owing to scholars arriving in England with preconceived plans and ideas based on the advice of educational authorities in India as to the courses of study they should follow and the institutions to which they should secure admission or owing to a scholar's unassisted efforts on his arrival to make his own plans without a sufficient knowledge of the requirements of the educational institutions in the United Kingdom. To obviate this cause of difficulty arrangements should be made to let the Office of the High Commissioner receive in good time any special suggestion that may be made by college professors and other educational authorities regarding the course of training which a particular scholar might follow with advantage.

(vi) Selected scholars should communicate with the local Advisory Committee (in Burma, the local branch of the Burma Society) in order that they may obtain advice regarding certificates, etc., and they should, when proceeding to England, take with them the originals of their certificates, testimonials and other important personal documents suggested to them by the local Secretary to the Advisory Committee.

(vii) Except in the case of a technical scholar whose training is to commence with manual work, State scholars are required to proceed to England with a reasonable time from the date of their selection so as to arrive there not later than the middle of September, and to reside there for the period of their scholarship unless compelled to return sooner in consequence of ill-health. The

scholarship will be payable from the date on which the scholars report their arrival in England. Selected scholars will be provided with a second-class passage to England and also with a second-class return passage if they carry out the instructions of the High Commissioner, and complete the full period of residence or are compelled by sickness to return within that period.

(viii) The scholarships carry with them no conditions as to any subsequent career or service under Government, and no expectations of such employment are held out.

SPECIAL RULES REGARDING STATE TECHNICAL SCHOLARSHIPS.

1. It had been the practice for the Government of India to award a number of technical scholarships not exceeding 10 in each year to hold good for a period of two years' study in Europe, and the sanctioned number of students in Europe at one time has thus been 20. The number has now been raised to 30, and this number will be the maximum but it is not necessary that the maximum number of scholarships should be awarded unless thoroughly competent and well qualified candidates present themselves (vide rule II). The number is fixed at 30 in order to give local Governments the power to award a technical scholarship to any man of suitable age and skill possessing qualifications hereinafter specified, who has shown exceptional initiative in any branch of industry and who seems likely to add considerably to his usefulness by a special training in Europe.

2. The sanctioned number of students holding technical scholarships in Europe at one time will be as follows for the various provinces:—

Madras, Bombay, Bengal and United Provinces	... 4 each.
Punjab, Burma, Bihar and Orissa, and Central Provinces.	3 each.
Assam and North-West Frontier Province	... 1 each.

(a) Madras will be taken to include Coorg, Bangalore and Hyderabad Cantonment,

(b) Bombay will be taken to include Baroda Cantonment.

(c) The United Provinces will be taken to include Ajmer-Merwara.

(d) The Punjab will be taken to include Delhi.

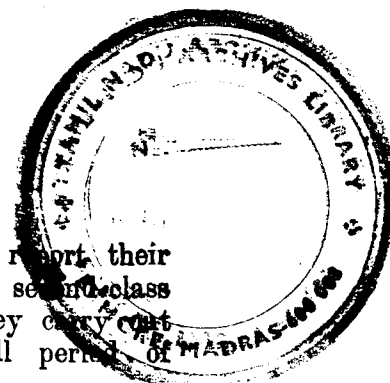
(e) The Central Provinces will be taken to include Central India.

(f) The North-West Frontier Province will be taken to include Baluchistan.

The various local Governments, though at liberty to consult the Government of India on any point, will in future conduct all routine correspondence regarding the appointment and training of technical scholars in direct communication with the High Commissioner for India in London.

3. The scholarships will be of the value of £300 per annum to be held subject to the observance by the scholar of the rules laid down for him by the Government of India or the High Commissioner. The scholarship may be withdrawn by the High Commissioner at the end of any year and it may be reduced while the scholar is being trained at works if the employer recommends this course. The scholar will also be required to execute a bond (see Annexure II to these rules) undertaking to repay the amount of the scholarship he has received if he fails to return to India when instructed by the High Commissioner to do so.

4. These scholarships will not be given for law, medicine, forestry, veterinary science, agriculture, civil engineering (other than sanitary and municipal engineering) or geology, nor for the extraction of alkalis or vegetable oil pressing. It should also be noted that certain industries in Europe, such as bleaching, dyeing, tanning and manufacture of chemicals, very rarely offer facilities for practical work for students in other branches of technological study, such as engineering and the textile industries, adequate opportunities can probably be found for scholars who possess the necessary qualities and training. If it is proposed to award a technical scholarship in any subject in which technical scholars have not



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hitherto been trained, enquiry should first be made from the Office of the High Commissioner several months in advance as to the facilities available. Certain special suggestions regarding particular industries are incorporated in Annexure I to these rules.

5. The scholarship in Europe should be for a suitable term, not less than two or more than five years. It is very desirable that this should in most cases be preceded by a practical training of not less than one year and should be followed by a period of about one year's practical work in India; and local Governments are at liberty to give from provincial revenues scholarships not exceeding Rs. 100 per mensem for the preliminary training, and scholarships not exceeding Rs. 150 per mensem for the subsequent period of practical work.

6. A Board of selection should be constituted in each province, and in the selection of candidates men of business, directors of industry and employers associations should be consulted. The selection of a scholar to proceed to Europe should be communicated to the Office of the High Commissioner in the form laid down in Annexure III to these rules. The recommendations should, in the case of scholars who intend to begin their training in England with manual work, reach the Office of the High Commissioner by the 1st December and the candidate should ordinarily reach England in March or April of the following year. In cases where a scholar is intended to commence his training in Europe with purely academic work, the recommendation should reach the Office of the High Commissioner by January and the scholar reach England not later than the middle of September.

7. The primary object of the selection should be to obtain a candidate whose experience and intelligence justify the expectation that his selection will help in developing the industries of India. As a rule he should not be selected for training in an industry not already established in India unless the co-operation of the promoters can be assured, nor for an industry for training in which facilities are not available in Europe. He should, if possible, be selected for training in an industry in an Indian capital and enterprise is engaged or likely to be engaged; this classification includes not merely textile and mining industries but also industries on a smaller scale such as pottery, tanning, and the making of matches, glass, sugar, pencils and paper; and where possible he should be a man already engaged in the industry. As a general rule, he should have had at least a year's practical training in a workshop, factory or mine, have proved his capacity to stand the strain and have learned enough of the industry to understand the theoretic teaching which must follow. When such training cannot be provided in India, the Office of the High Commissioner should be asked to arrange a similar training in Europe. Attention is also invited to the suggestions regarding special industries which are appended to these rules. If the Board of selection desire advice from expert officers attached to the Government of India, they are at liberty to address them on the subject; and it is suggested that if a candidate is to be trained in any industry connected with agriculture, the advice of the Agricultural Adviser to the Government of India should be obtained. When a scholar has had a preliminary training in India, a report on his work and progress should be sent to the High Commissioner. Any special suggestions which the Board of Selection may wish to make regarding the course of training to be followed in England should be communicated to the Office of the High Commissioner, and in making such suggestions the Board should consider the proposals made by the existing employers (if any) of the candidate. If possible, the employers should be induced to guarantee employment to the scholars on their return to India, and in no case shall a technical scholarship be given to a candidate unless there is a definite prospect of his obtaining employment, in which he will be able to put to use in India the experience and training he will have gained. Local Governments should supply the Office of the High Commissioner with as detailed information as possible as to the kind of employment a scholar is likely to obtain on return.

8. In the case of indigenous industries such as tanning, flour milling, etc., a scholar should, if possible, in addition to an aptitude for the industry, inherited or acquired, have adequate educational qualifications, but in the case of candidates who

have not both qualifications those who have the qualification of aptitude for the industry should have the preference, provided they have sufficient working knowledge of English to follow lectures in that language.

9. The educational qualifications referred to above are as follows:—Those who are to study textile industries should have read up to the standard of B.Sc. degree or the B.A. (with Science) or have obtained an equivalent diploma. Those who take up any branch of engineering should have passed the B.A., B.Sc., or B. Eng., should have a knowledge of mechanical drawing and descriptive geometry, and should have taken mathematics, physics and chemistry among the subjects for their degree. Scholars should be provided with certificates from the University showing in what subjects they have passed, what degree of proficiency they have reached and what marks they have secured.

10. Satisfactory evidence of good character should be obtained, and a candidate should ordinarily be of such character and habits and of such an age (not exceeding 25 years) that detailed tutelage should be unnecessary. He should also pass a searching examination as to physical fitness.

11. The fact of a vacancy existing shall not be considered a reason for awarding a scholarship if a suitable candidate is not forthcoming.

12. Candidates should be made clearly to understand (a) that the scholarships are not intended to endow the holders or prepare them for Government service; (b) that the scholar in each case is selected for a definite purpose and will be expected on proceeding to England to enter at once, and without discussion of possible alternatives on the course of training laid down for him, and to comply with whatever instructions and to do whatever kind of work it may involve; and (c) that when his period of training is over he will be expected in every case to return to India, and to use there the knowledge he has gained for the benefit of his country.

13. The local Government should receive an annual report from the Office of the High Commissioner of the progress made by each scholar in his training; and the Board of Selection or some similar body should, with the assistance of local manufacturers and employers, endeavour to find employment for scholars, whether these are provided with a further scholarship on their return or not. When a scholar has a scholarship after his return, the Board should settle the nature of his practical training while he is drawing the scholarship, and should, if they think this fit and practicable, obtain from the new employer a report on the way in which the scholar has progressed during his training, and his value as a Technological Specialist. In such a case the scholar should at the end of his period of training receive from the Board a detailed statement of his training, together with the final opinion of the Board on his qualifications. Though scholars are to clearly understand that Government cannot guarantee them employment, the Board should make every endeavour to secure permanent employment for scholars at the earliest possible date after the completion of their training.

14. The local Government should in January of each year send a return to the Government of India and the Office of the High Commissioner showing how all scholars from the province who have returned since 1910 are employed, and what salaries they are drawing.

SUGGESTIONS REGARDING SPECIAL INDUSTRIES.

1. *Engineering*.—(i) All engineering students of whatever branch should receive a year's preliminary workshop course in a mechanical engineer's shop in India.

(ii) Indians who come to the United Kingdom for their college course should have taken the B.A., B.Sc. or B. Eng. degree and have received a training in mathematics, physics, chemistry and engineering drawing of a sufficiently advanced character to enable them to join a second-year class at once; special instruction in mechanical drawing and descriptive geometry is required, and should be given in India.

II. Mining.—(i) Scholarships in Mining (as distinguished from Geology) shall only be given to men who intend to become mine managers or mining engineers.

(ii) In every case the candidate shall have actually worked for at least one year in an Indian mine, preferably in a paid position.

(iii) A special strict test of physical fitness shall be imposed on candidates before selection.

(iv) The candidate shall have reached the B.A. or B.Sc. standard in physics (theoretical and practical), chemistry and mathematics, mechanics and practical geometry.

III. Mining Geology.—Candidates should possess a knowledge of economic geology and some experience of surveying and mining methods.

IV. Metallurgy.—(i) Scholarships should be granted only to men who have had previous experience of metal industries, a knowledge even of primitive processes being valuable; and candidates who lack such experience should be sent for some months to metal works in India before coming to this country for their training.

(ii) If possible notice be given beforehand of the branch of metallurgy that the scholar intends to take upon his return to India.

V. *Spinning and Weaving*.—Scholars should in all cases have had considerable experience in one or more Indian mills, preferably through having served in a paid position.

VI. Bleaching and Finishing.--It is almost impossible for Indian students to obtain in England anything more than the training given in technological colleges, and, in order that they may complete this by practical experience, efforts should be made to secure openings for a few carefully selected men in up-to-date bleaching establishments in India; but in the woollen industry facilities for practical training are procurable to a limited extent in Europe.

VII. *Dyeing*.—No scholarships be granted for a candidate who does not possess some knowledge of the dyeing industry as carried on in India, and has reached the B.Sc. standard in chemistry.

VIII. *Tanning.*—(a) As regards students who aim at becoming owners or managers of tanneries—

(i) Hereditary connexion with the leather industry is desirable, and a knowledge of Indian methods is essential.

(ii) Where these conditions are satisfied, high academic qualifications need not for the present be insisted upon; a fair knowledge of chemistry, physics, and some knowledge of mathematics and acquaintance with the metric system of weights and measures will suffice.

(b) As regards those who intend to take up scientific research as applied to leather industries—

(i) The scholarship shall only be granted after the student has received the highest scientific training in India.

(ii) He must have shown considerable aptitude for research work.

IX. Chemical Manufacturers.—The grant of scholarships for the study of chemical industries in the United Kingdom is of doubtful utility; training in India would be preferable, and before any such scholarship is granted, inquiry should be made as to the possibility of providing in Europe a complete training in the special branch of industry concerned, full particulars being furnished to the office of the High Commissioner as to candidates' qualifications and prospects of finding employment on their return to India.

FORM OF BOND.

Know all men by these presents, that we,
(undergoing a course of instruction in connexion with a Government Technical Scholarship)
and
do hereby bind ourselves, and each of us, our and each of our heirs, executors, and adminis-
trators, to pay to the Secretary of State for India in Council
the penal sum of 1,000 £.

Sealed with our seals, dated _____ day of _____ one
this _____ thousand nine hundred and _____

Whereas the above bounden
has been nominated to a Government technical scholarship :
And whereas the above bounden
as nominee of such scholarship is entitled under certain conditions to 200 l per annum for
years, tuition fees, certain travelling expenses, and also a second-class return passage
from India to England and back.

Now the condition of the above-written obligation is that—

If, in the event of the above conditions not returning to India, as and when directed by the Government of India, or the High Commissioner, or the Local Government by which he was nominated, he shall forthwith refund to the Secretary of State for India in Council

refund to the Secretary of State for India in Council paid to him or on his behalf in respect of the said scholarship, tuition fees, travelling expenses, or second-class return passage.

Then the above-written obligation shall be void and of no effect, otherwise it shall be and remain in full force and virtue.

Signed, sealed, and delivered by
the above bounden
in the presence of
Signed, sealed, and delivered by
the above bounden
in the presence of

N.B.—The names of some members of the scholar's family, of other persons interested in him should be included in the bond, so that (if necessary) legal proceedings may, without difficulty, be taken in India; and it may be hoped that the fact that these persons would be liable to suffer in the event of his breaking his contract, will exercise a restraining influence on his conduct. If the scholar's name alone appears, the bond will be of no practical value.

Form in which recommendations for State technical scholarships should be made.

[illegible]

RULES FOR STATE TECHNICAL SCHOLARS IN THE UNITED KINGDOM.

1. All Government scholars are required to avail themselves of the information and advice which the Joint Secretaries to the High Commissioner for Indian Students' work and the Local Advisers at university centres are in a position to give them, and to apply to their Local Adviser for instructions as regards their studies and in any circumstances of difficulty. The Local Advisers at Manchester, Edinburgh, and Glasgow have charge of State scholars studying at those places, and the Secretary to the Delegacy for Oriental Students at Oxford, and the Secretary to the Inter-Collegiate Indian Students' Committee at Cambridge (who, for this purpose act as Local Advisers) have charge of scholars studying there. Scholars studying elsewhere than at Manchester, Glasgow, Edinburgh, Oxford or Cambridge will be under the charge of a Joint Secretary to the High Commissioner. The Adviser is the proper person to bring before the Joint Secretary to the High Commissioner any matter requiring the sanction of the High Commissioner or the Government of India.

2. Every scholar should on reaching England at once report himself to one of the Joint Secretaries at the Office of the High Commissioner in London, 42, Grosvenor Gardens, S.W.1. Accommodation for new arrivals is provided at 21, Cromwell Road, South Kensington, S.W.7.

3. Every scholar must obey all instructions which he may receive either through the Joint Secretary to the High Commissioner or through his Local Adviser, and must consult his Local Adviser regularly in regard to his work. No course of study will ordinarily be sanctioned which does not provide for an adequate practical training. Any course which has received the sanction of the High Commissioner will not be changed without similar sanction. All scholars in electrical engineering shall be required, at the discretion of a Joint Secretary, to join the Institution of Electrical Engineers. Their subscriptions and entrance fees will be refunded by the High Commissioner.

4. Every scholar must from time to time, whenever, the Joint Secretary or the Local Adviser requires it, submit a certificate from the proper college or university authority or from any other authority under whom he is working, showing that his conduct and progress have been satisfactory.

5. Every scholar must give a written undertaking that he will at once and without discussion of possible alternatives devote himself exclusively to the course of training laid down for him, to comply with whatever instructions and to do whatever work it may involve and also that on return to India he will devote himself to the industry which he has studied. Any scholar who neglects his studies, or tries to work for any other profession concurrently, will render himself liable to forfeiture of his scholarship. He must also execute a bond undertaking to repay the amount spent on him if he fails to return to India when instructed to do so.

6. Every scholar will be required to keep a concise diary of his work to be submitted to the Joint Secretary or Local Adviser at the dates laid down in the rules for the keeping of such diaries.

7. Scholars will be expected to continue their studies during vacations with the exception of three weeks in each year. Vacation study should, as far as possible, take the form of practical work.

8. Plans for vacation work, accompanied by a complete estimate of any extra expenses for fees or travelling involved, should be sent to the Joint Secretary or Local Adviser six weeks before the end of any academic term. Scholars are not entitled to any subsistence allowance in addition to the scholarship allowance during time spent on vacation work, but a scholar who receives permission to visit the continent may, if the High Commissioner considers that the circumstances under it desirable, be granted a subsistence allowance calculated at such rate as the High Commissioner may decide.

9. Subject to a due compliance with the above conditions, the scholar's allowance will be paid quarterly in advance by the Office of the High Commissioner to the Joint Secretary or the Local Adviser under whose charge he is. It will begin from the date of the scholar's reporting his arrival in England, and the Joint Secretary or the Local Adviser will disburse it to the scholar in such instalments as convenience may dictate. Three months after the date of reporting arrival the amount to the ensuing official Quarter Day* will be paid to the Joint Secretary or the Local Adviser, and subsequent payments will be made in advance on or after each official Quarter Day. The allowance will be at the rate of 200% a year, it may be withdrawn by the High Commissioner at the end of any year, and it may be reduced while the scholar is being trained at works, if the employer recommends this course.

10. Every scholar is required to lodge with the Joint Secretary at the Office of the High Commissioner in London, before his arrival in England, the sum of 40% for initial expenses. He will have no claim to payment of any instalment of his scholarship until this deposit has been made.

11. Charges for university and college fees, premiums for practical training, and the necessary travelling expenses of scholars by second class, or by third class if the second be available will, if sanctioned, be defrayed by the High Commissioner. Applications for payment of all these charges should be made through the Joint Secretary or the Local Adviser. But charges for private tuition, unless specially sanctioned, for books, instruments, hotel bills and medical attendance, must be paid by the scholar himself.

12. No claim can be admitted for the payment of any expenditure unless the scholar has obtained previous sanction from the High Commissioner.

13. The scholarship is granted for two years at least, unless the High Commissioner in the exercise of his discretion sees reason to terminate it sooner. Every scholar will forfeit his scholarship who, not being disabled by illness or prevented by any other cause which the High Commissioner may consider sufficient, fails to comply with the rules here set forth. It may be terminated at any time if a scholar fails in health or conduct. It may also be extended up to five years if the High Commissioner recommends that such an extension is required to complete the scholar's training and the Local Government concerned sees no objection to the suggested extension being granted.

14. On the expiration of the scholarship a scholar will be provided by the Office of the High Commissioner with a free second-class passage to India, and he should apply for it without delay through his Joint Secretary or Local Adviser. He is not entitled to make his own passage arrangements and to claim an allowance in lieu from the Office of the High Commissioner. If a scholarship be forfeited, or if it be resigned before completion of its term, the scholar will lose his claim to a free passage back to India.

15. Scholars should clearly understand that the scholarships are not intended to endow the holders or prepare them for Government service. But on return to India a scholar should report his arrival to the Local Government concerned so that the question of giving him facilities for practical training in India may be taken up without delay.

* NOTE.—The Official Quarter Days are the 1st of January, the 1st of April, the 1st of July and the 1st of October.

ANNEXURE III.

INDUSTRIAL SCHOLARSHIPS.

Industrial scholarships will be awarded by the Director of Industries to pupils learning a trade or profession in recognized industrial schools or to selected apprentices (boys or girls) serving properly arranged apprenticeships for a specified term of training in workshops or mills where provision is made for the apprentices receiving class instruction in working hours for not less than four hours per week in subjects calculated to improve their value as artisans or operatives on completion of their training. The aim of these scholarships is to encourage deserving apprentices and pupils to complete their whole apprenticeship or period of training at one institution or workshop and so to some extent check the present tendency of apprentices to move from workshop to workshop in search of a few annas increase in wages to the detriment of their training and the annoyance of their employers.

2. For the present, sixty scholarships will be awarded per annum tenable in approved schools or workshops or mills for a period of five years or such shorter term of apprenticeship as may be usual in the particular trade or occupation.

The scholarships will be of the value of—

Rs. 1-8 per month during the first year of training.

Rs. 2	second
Rs. 3	third
Rs. 5	fourth
Rs. 7-8	fifth

A bonus equivalent to two months' average scholarship will be granted for each year of training to such of the apprentices as satisfactorily complete the whole period of training agreed on at the commencement of the scholarship.

The conditions of award will be as follows:—

(1) All scholarship holders shall be on probation for six months, after which the scholarship will be confirmed or withdrawn after consideration of a report from the employer or teacher regarding the scholar's work. Scholarships will ordinarily be granted to members of the artisan castes or to others whose families are already in the trade.

(2) No scholarship will be granted to candidates who are over seventeen years of age at the commencement of their apprenticeship, but in the case of Muhammadan candidates the age-limit may be raised by two years.

(3) The general educational attainments of candidates should be such as would enable them to profit by the training provided. Ordinarily a standard V pass in the primary grade will be regarded as the absolute minimum, but the nature of the trade to be followed, the pecuniary circumstances of the candidate, and his general fitness for the work will be taken into account in deciding whether a candidate is qualified for the scholarship.

(4) The candidate and his guardians must enter into an agreement with the employer that he will faithfully fulfil the conditions of apprenticeship, and unless prevented by sickness or other circumstances beyond his control, serve the full term of apprenticeship that may be agreed on.

General Regulations.

3. Applications for scholarships tenable from 1st July 1923 should be submitted by the head of the institution in which a candidate is studying or intends to study or by the candidate's employer or his manager on or before the 1st June 1923. Applications should be accompanied by a 'clearance' certificate from the school last attended and by such other particulars as are likely to assist the Director in coming to decision, and should be made on forms which may be obtained from his office.

4. The names of selected candidates will be notified by the Director of Industries in the *Fort St. George Gazette*. Each scholarship will come into force on the 1st July 1923.

5. Any scholarship withdrawn during the period for which it is tenable may be awarded with the consent of the Director of Industries for the remaining period to any eligible applicant.

6. Heads of institutions and employers may grant leave for a period not exceeding one month to scholars who are absent in consequence of severe sickness; but if the leave exceeds this period, no scholarship will be granted for the period exceeding one month. Casual leave may be granted for good and sufficient reasons for a period not exceeding fifteen days in the year. If a scholarship holder absents himself without good reason on the reopening day after the vacation or holidays, the scholarship for the vacation or holidays is liable to be withheld by the Director of Industries.

7. No person receiving a scholarship under this notification will be permitted to hold another scholarship, provided wholly or partially by Government, without the special sanction of the Director of Industries.

8. All scholarships are liable to forfeiture for idleness, misconduct, irregularity in attendance or failure to make due progress or to secure annual promotion.

9. A scholarship held in any class or year of apprenticeship shall run from the beginning of the month in which the holder joins the class and shall not be drawn after he ceases to attend the class or leaves the workshop. The scholarships are payable monthly.

10. In all cases where poverty has been made a condition of award, applications will be summarily rejected unless there is evidence to show that but for a scholarship the applicant will not be able to continue his studies.

11. In addition to any register maintained under rule 60 of the Madras Educational Rules an acquittance roll containing the following information shall be maintained by the heads of the institutions or employers concerned and should be produced at the time of any departmental inspection of the institution, or workshop or mill:—

(1) Number; (2) name of scholarship-holder; (3) standard of scholarship; (4) monthly value of the scholarship; (5) period tenable; (6) number and date of the order in which the scholarship was sanctioned; (7) month for which the scholarship bill was drawn; (8) date of the encashment of the bill; (9) date of disbursement of the scholarship money and amount; (10) signature of the scholarship-holder; and (11) remarks.

12. Government trust that employers of labour will co-operate with Government in this scheme to the extent of conducting recognized classes in their works during working hours or allow their apprentices time off duty to attend classes in the Madras Trades School or any other place where suitable training is provided.

13. Works schools and classes will be eligible for recognition and for a Government grant provided they are conducted to the satisfaction of the Director of Industries, irrespective of the number of scholarship-holders in attendance.

ANNEXURE IV.

Notes on the work of the Committee with proceedings of the various meetings.

G.O. No. 528, Development, dated 8th April 1922.

At the meeting of the Legislative Council held on the 15th November 1921, M.R.Ry. S. Arpudaswami Udayar Avargal, M.L.C., moved the following resolution :—

“That this Council recommends to the Government that the following provision be made for secondary education :—

1. That two kinds of schools be opened for secondary education—
 - (a) technical or commercial schools, and
 - (b) secondary schools properly so called.
2. That each kind be divided into first and second grade schools—
 - (a) first-grade technical schools should provide the country with trained labour, tradesmen, shopkeepers, weavers; the course for this grade should last three years and include not only apprenticeship in arts, trades, industries, but also such instruction in the Vernacular and English, Arithmetic, Mensuration, History and Geography and Drawing and Modelling as will make the pupils worthy and useful citizens; a syllabus should be drawn up and approved for this course;
 - (b) second-grade technical schools should provide the country with highly-skilled and artistic labour, foremen for workshops of all kinds, especially of workshops for the production of the highest forms of industry and trade articles; the course for this grade should last three or four years and the syllabus should also include such instruction in languages, History and Geography, Mathematics and Science as will make the pupils worthy citizens and men of sound knowledge and information;
 - (c) first-grade secondary schools should provide elementary school teachers, clerks for the lower offices in the service; a syllabus should be drawn up and approved for this course;
 - (d) second-grade secondary schools should prepare candidates for the higher studies in the University, or in the highest grades of the professional colleges, no syllabus, headmasters and managers should be required to determine the course of studies, but an examination should be undergone at the end of the course as a test of fitness to proceed to the University or professional colleges.

In the course of the discussion the Hon'ble Rao Bahadur A. P. Patro, Minister for Education, pointed out that the second part of the resolution was included in the scope of reference to the Educational Reorganization Committee recently appointed by the Government and that the mover being himself a member of that Committee should bring this part of his resolution to the notice and attention of that Committee.

As regards industrial and technical education, as distinguished from secondary education and also from vocational education and manual training, the Hon'ble Rai Bahadur K. Venkata Reddi Nayudu, Minister for Development, agreed on behalf of Government to appoint a Committee to examine the whole question and submit a comprehensive scheme for an organized system of industrial and technical education.

2. In pursuance of the undertaking then given by the Hon'ble the Minister for Development, His Excellency the Governor is pleased to appoint the following Committee of officials and non-official gentlemen subject to their consent to serve :—

- (1) Mr. M. E. Couchman.
- (2) Mr. W. Fyfe.
- (3) Mr. C. W. E. Cotton, C.I.E., I.C.S., M.L.C.
- (4) Mr. R. Littlehales, M.L.C., Director of Public Instruction.
- (5) Mr. W. H. James, Principal, Engineering College.
- (6) Rev. B. Rottschaeffer, Industrial School, Katpadi.
- (7) Mr. M. A. Walker, Acting Deputy Loco. Superintendent, Madras and Southern Mahratta Railway.
- (8) Sir P. Tyagaraya Chetti Garu, M.L.C.

- (9) M.R.Ry. C. Ramalinga Reddi Avargal, M.L.C.
- (10) „ M. Krishnan Nayar Avargal, M.L.C.
- (11) „ S. Arpudaswami Udayar Avargal, M.L.C.
- (12) „ T. C. Srinivasa Ayyangar Avargal, M.L.C.
- (13) „ A. Subbarayadu Nayudu Garu, M.L.C.
- (14) „ R. T. Kesavalu Pillai Avargal, M.L.C.
- (15) Mr. H. M. Ibrahim Sait.
- (16) M.R.Ry. L. K. Tulsiram Avargal, Madura.
- (17) Dr. P. Subbarayan, M.L.C.
- (18) M.R.Ry. Y. Ranganayakulu Nayudu Garu.
- (19) Khan Bahadur Muhammad Sadulla Badsha Sabib Bahadur.

Mr. M. E. Couchman will be the President of the Committee and Mr. Fyfe will act as Secretary. The Committee will have power to co-opt additional members.

Another Committee has recently been appointed for the purpose of revising the scheme of Government technical examinations. The Government trust that the presence on the Committee on Industrial and Technical Education now constituted of several members of the Committee dealing with the technical examinations will ensure co-ordination between the labours of the two Committees.

3. Broadly speaking, the object of technical and industrial education is, in the view of Government, to supply—

- (1) a force of skilled labourers in organized as well as cottage industries;
- (2) the inferior directing agency required for controlling that labour such as foremen, managers of workshops, technical assistants and superintendents, etc.;
- (3) the superior directing agency such as chief engineers, factory managers, etc.; and
- (4) expert chemical and other advisers for purposes of scientific research as applied to industries.

4. The Committee will inquire into the present equipment of the Presidency in these respects and will draw up a comprehensive scheme for an organized system of industrial and technical education to meet the needs of the present and the reasonably near future. They will, in particular, advise as to the following topics :—

- (1) Whether control of existing and future institutions for technical industrial engineering or commercial education should be centralized in the Department of Industries;
- (2) the establishment of a technological college and of a research laboratory;
- (3) the grades or classes of institutions (classes, schools or colleges) whose establishment they may recommend including, if necessary, special schools for particular trades or industries or branches of these;
- (4) the curricula for these;
- (5) to what extent general educational qualifications, or the possession of special mechanical aptitude, is to be required as a condition precedent to admission into the various classes of institutions;
- (6) to what extent industrial and technical instruction should be imparted in the ordinary schools for general education and should qualify for admission into the special institutions to be created;
- (7) the question of introducing a system of apprenticeship;
- (8) the industrial and technical education of girls and women;
- (9) the training of teachers for industrial and technical institutions;
- (10) the question of the grant of technical scholarships within or without the Presidency and the conditions of such grants;
- (11) an estimate of the initial and recurring expenditure to be incurred on the measures recommended, to be spread over a reasonable period of development, say, ten years;
- (12) the extent to which local bodies should share in the expenditure contemplated;
- (13) the extent to which factories, workshops or other industrial concerns can be expected to render assistance or to bear expenditure;
- (14) the legislative measures (if any) required to give effect to the proposals of the Committee.

5. The field of enquiry is a wide one and the Committee will have power to constitute sub-committees to deal with particular subjects or groups of subjects.

6. Non-official members of the Committee, whether co-opted or not, will be allowed to draw travelling allowance and daily allowance at the rates allowed for first-class officers for journeys undertaken to attend the Committee's meetings or to make, under the authority of the President of the Committee, journeys of inspection, etc., in pursuance of the Committee's enquiries. The President of the Committee is declared to be the controlling officer for the purpose of countersigning the bills of the members of the Committee. The Committee may invite persons to give evidence, written or oral, and the President may grant to witnesses examined before it reasonable travelling expenses to cover the cost of their attendance. The Secretary of the Committee will submit to Government proposals for a small clerical staff, if any is needed, to transact the business of the Committee and regarding contingent expenditure.

7. A specific provision of Rs. 10,000 has been voted by the Legislative Council on account of the expenses of the Committee.

8. The Committee will meet in the Committee Room, Fort St. George, and the Secretary will arrange dates in consultation with the President of the Committee.

(By order of the Government, Ministry of Development)

H. G. STOKES,
Acting Secretary to Government.

To the members of the Committee.
" Director of Industries.
" Accountant-General (through Finance Department).
" Publicity Officer.

II

Proceedings of the preliminary meeting of the Committee on Industrial and Technical Education, held at Fort St. George, at 8 a.m., on Monday, the 18th September 1922.

PRESENT:

- | | |
|-------------------------------------|-----------------------------------|
| (1) Mr. M. E. Couchman (President). | (8) Mr. C. Ramalinga Reddi. |
| (2) " C. W. E. Cotton. | (9) Sir P. Tyagaraya Chetti Garu. |
| (3) " R. Littlehailes. | (10) Mr. A. Subbarayadu Nayudu. |
| (4) " W. H. James. | (11) " Y. Ranganayakulu Nayudu. |
| (5) Rev. B. Rottschaeffer. | Garu. |
| (6) Mr. M. A. Walker. | (12) " W. Fyfe (Secretary). |
| (7) " T. C. Srinivasa Ayyangar. | |

The President informed the meeting that Mr. Buchanan of Messrs. Parry & Co. had resigned his seat on the Committee. Mr. P. G. Porteous, Mr. A. L. K. Somasundaram Chetti and Mr. M. Chengalvaraya Chettiar had expressed their inability to serve, and that Government had appointed Mr. M. A. Walker, Acting Deputy Locomotive Superintendent, Madras and Southern Mahratta Railway, in place of Mr. Porteous, and Dr. P. Subbarayan, M.L.C., in place of Mr. Somasundaram Chetti, but that no substitute had been appointed for Mr. Buchanan or Mr. Chengalvaraya Chettiar.

The President suggested that the first business of the Committee was to decide on the number and scope of sub-committees and to appoint those sub-committees, but Mr. Littlehailes, Director of Public Instruction, requested that before proceeding to deal with the question of sub-committees a general discussion might be allowed on the questions at issue. He pointed out that it would assist the sub-committees in their work if a general discussion was held on several of the topics enumerated in the Government Order constituting the Committee. After a short general discussion, during which Mr. Littlehailes explained briefly the views of the Education Ministry with regard to pre-vocational and vocational training in ordinary schools, the meeting proceeded to appoint sub-committees.

The following sub-committees were appointed:—

- (1) *Commercial education*—
Mr. M. E. Couchman (Convener).
" R. Littlehailes, Director of Public Instruction.
" S. Arpudaswami Udayar.
" M. Krishnan Nayar.
" Dandekar (co-opted).
- (2) *Industrial schools (excluding weaving)*—
Mr. C. W. E. Cotton (Convener).
Rev. B. Rottschaeffer.
Sir P. Tyagaraya Chetti Garu.
Mr. W. Fyfe.
- (3) *Weaving schools*—
Mr. H. M. Ibrahim Sait (Convener).
" L. K. Tulsiram.
Sir P. Tyagaraya Chetti Garu.
Mr. D. M. Amalsad (co-opted).
Rev. Theill (co-opted).
- (4) *Technical education*—
Mr. R. Littlehailes (Convener).
Dr. P. Subbarayan.
Mr. W. H. James.
" A. Subbarayadu Nayudu.
" C. Ramalinga Reddi.
- (5) *Apprenticeship*—
Mr. W. Fyfe (Convener).
" T. C. Srinivasa Ayyangar.
" M. A. Walker.
" H. M. Ibrahim Sait.
" R. T. Kesavalu Pillai.
- (6) *Women's work*—
Deferred.
- (7) *Scholarships*—
Mr. C. W. E. Cotton (Convener).
" C. Ramalinga Reddi.
" A. Ranganayakulu Nayudu.
" S. Arpudaswami Udayar.
- (8) *Training of teachers*—
Mr. R. Littlehailes (Convener).
" W. Fyfe.
" C. Ramalinga Reddi.
" W. H. James.
- (9) *Finance*—
Deferred.

It was further agreed that the sub-committee dealing with the training of teachers should meet only after the reports of the other sub-committees had been received and that the formation of the sub-committee to consider the financial aspect of the recommendations of the various sub-committees should be deferred for the present.

It was agreed that the conveners of different sub-committees should arrange meetings of their sub-committees at times and places suitable to the convenience of the members of the sub-committee concerned, but that no expenditure to Government should be incurred in travelling allowance to the members of the sub-committee or witnesses whom they may wish to summon to give evidence, without the prior consent of the President.

It was decided to give no detailed instructions to the sub-committees, but to leave it to the conveners to decide which of the fourteen topics enumerated in paragraph 4 of G.O. No. 528 came within the scope of their particular sub-committee and

to submit their recommendations accordingly. It was recognized that this might entail slight overlapping, but it was considered that such overlapping, if any, would be to the general good rather than otherwise.

The appointment of the women's work committee was deferred for the present. It was agreed that the President should make enquiries as to the names of suitable ladies willing to serve on such a committee and should, before finally making the appointment, circulate the names amongst the other members for their approval or otherwise.

It was further decided that the sub-committees' reports should reach the Secretary before the 1st November 1922, and that the next general meeting of the Committee to consider these reports should be on Saturday, the 11th November 1922.

III

Proceedings of the meeting of the Sub-Committee on Commercial Education held at Chepauk on 27th October 1922.

PRESENT:

M. E. Couchman, Esq. (Convener).

R. G. Grieve, Esq.

M.R.Ry. M. K. Dandekar Avargal.

" S. Arpudaswami Udayar Avargal.

Mr. W. Fyfe, Secretary, was also present.

The sub-committee unanimously agreed that—

(1) commercial education should remain under the Director of Public Instruction;

(2) this committee is not concerned with topic No. 2 of paragraph 4 of G.O. No. 528, dated the 8th April 1922;

(3) with regard to classes or institutions providing commercial education, the Committee understand that the present facilities consist of:—

(a) the Government Institute of Commerce, Madras;

(b) the School of Commerce, Calicut;

(c) aided commercial classes in the Young Men's Christian Association, Madras;

(d) aided commercial classes in the Pudupet Convent, Madras;

(e) commercial classes in about 100 secondary schools (C group for the secondary school-leaving certificate) and

(f) a number of private unrecognized and unaided classes or institutions teaching short-hand and type-writing scattered throughout the Presidency.

The sub-committee consider that—

(a) the present Institute of Commerce should be developed into a commercial college to prepare students for a degree in commerce, when that has been established;

(b) that it is desirable to institute an intermediate certificate in commerce on the lines of the recent recommendations of the sub-committee of the Senate;

(c) that the system of teaching commerce in secondary schools should be developed and that such secondary school instruction should lead up to the intermediate certificate in commerce and the University degree in commerce when such are established;

(d) that classes should be started in various centres throughout the Presidency to work on the lines of the Madras Trades School, and to provide a training in commercial subjects for persons who have already left school and are engaged in occupations where a knowledge of such subjects would be of value. The time-tables of such classes should be arranged to fit in with the ordinary working hours of the students, the classes being held in the mornings or afternoons. Such classes should be recognized and aided by Government on conditions which will ensure that the teachers are properly qualified and that the equipment is modern and sufficient.

Such classes should prepare students for the Government technical examinations and should meet the existing need for instruction in commercial subjects, the existing facilities for which the Committee consider quite inadequate.

(4) *Curricula*.—The committee consider that there is no need to prepare syllabuses for the secondary school, intermediate or University classes as the Secondary schools have already got a curriculum and the curriculum for the intermediate and degree classes will be settled by the University when classes are instituted. The committee do not consider it necessary to draw up a curriculum for the continuation classes as the conditions and requirements will vary according to local conditions and syllabuses will have to be worked out by the officers of the Department of Public Instruction.

(5) With regard to item 5, the sub-committee is prepared to adopt the findings of the Committee on Technical Examinations referred to in paragraph 2 of G.O. No. 528 and to accept the standard agreed on by that committee as the minimum standard for admission to the examinations as to the standard of admission to the classes also.

(6) Commerce is already taught in secondary schools and such secondary school instructions will lead up to the intermediate and degree classes when such are instituted.

(7) Item No. 7 is being dealt with by another sub-committee.

(8) No special facilities are necessary at present for training women and girls in commercial subjects. It is open to them to take advantage of existing facilities and they should be able to utilize the other types of classes which we recommend should be instituted.

The remaining topics, 9 to 14 (inclusive) are being dealt with by other sub-committees and do not come within the scope of the sub-committee on commercial education.

Note by the Secretary.

The position of the School of Commerce at Calicut is left in doubt, but presumably it will provide—

(a) day school instruction qualifying for the intermediate certificate in commerce, and

(b) continuation classes in the mornings and evenings for those engaged during the day.

III-A

Proceedings of the Sub-Committee on Weaving Schools.

A meeting of the sub-committee on weaving schools was held on Tuesday, the 17th October 1922.

The following members were present:—

Mr. H. M. Ibrahim Saït.

Sir P. Tyagaraya Chetti Garu.

Mr. D. M. Amalsad.

The Rev. V. Theill.

Mr. P. Subbarayan (Convener).

The committee came to the following conclusions:—

(1) The sub-committee recommends by a majority that, as far as weaving schools are concerned, such institutions ought to be under the control of the Department of Industries.

(2) The committee is of opinion that the Textile Institute at Madras can be so improved as to serve as a Central Technological Institute for weaving and dyeing.

(3) (a) The committee recommends that a beginning may be made by establishing four weaving schools in the Presidency say in the Telugu, Tamil, Ceded and the West Coast areas, providing lower course of studies in weaving.

(b) The committee is further of opinion that in the beginning in the mufassal schools it will be necessary to give stipends to the students.

(4) The committee leave the framing of the curricula to the Department of Industries.

(5) The committee recommends that the admission to the higher course of studies in the Government Textile Institute, Madras, be restricted ordinarily to those who have completed the lower secondary course with power to grant exemptions in the case of men with low qualifications, but who have had practical experience and who want higher training.

In the case of the lower course in the Government Textile Institute, Madras, and in the mufassal schools the committee is of opinion that admission may be restricted to those who have completed their lower elementary school course.

(6) The committee recommends that a weaving section might with advantage be attached to elementary schools in all the large weaving centres.

(7) The committee leaves this question for consideration to the General Committee.

(8), (9) & (10) On these the committee make no recommendations as there are separate sub-committees appointed.

(11) The committee recommends that a better and extensive place may be provided for the location of the Textile Institute, Madras.

(12) The committee is of opinion that for the present all expenditure towards the establishment of the schools recommended by it should be borne by Government, and when the results are known, and the utility of these institutions become apparent, the local bodies may be asked to contribute to the upkeep of these institutions or run it themselves.

(13) The committee thinks that under the existing circumstances it is not feasible to ask private bodies to contribute any amount towards the expenditure on these institutions.

III-B

Proceedings of the Sub-Committee on Technical Education at the meeting held in the Office of the Director of Public Instruction on the 16th October 1922.

1. There were present Mr. Littlehailes, Dr. P. Subbarayan, Mr. W. H. James and Mr. C. Ramalinga Reddi. Mr. Ramalinga Reddi had to leave the meeting before its termination on account of other business.

2. Mr. Fyfe's Note on Technical Education, dated the 5th October, was considered and rejected. The terminology used by Mr. Fyfe was not accepted by the committee.

3. The sub-committee unanimously agreed that technical and higher technological (including engineering) training should be under the control of the Department of Education or Public Instruction.

4. It was agreed that the College of Engineering at Guindy might and could be expanded in any direction desired, so as to develop in due course into a technological institute.

5. It was agreed that research could be undertaken in existing laboratories, for example, in the laboratories of the College of Engineering, Guindy, of the Tata Institute, Bangalore, and of the Agricultural College, Coimbatore; and that when further need arises special laboratories might be started.

6. It was agreed that technical education should, so far as higher technical education is concerned, be developed in the existing institutions mentioned in the previous paragraph.

7. It was agreed that the qualification for admission into a technical or technological institute should ordinarily be the intermediate standard of the University, but provision should be made for allowing of exceptions to this rule in the case of persons who have had practical training in the profession in which they desire to obtain higher training and instruction.

8. It was agreed that industrial and technical instruction should not be imparted in the ordinary schools for general education.

9. Regarding the training of teachers the College of Engineering makes provision for training teachers. This provision is indicated in the following extract from the rules for the working of the College of Engineering, Guindy:—

"49. Four stipends of the monthly value of Rs. 6 for the first year, Rs. 7 for the second year and Rs. 8 for the third year will be awarded annually to young

men who have passed the elementary technical examination in carpentry, or blacksmith's work, and who join the College workshop to be trained as teachers in technical or industrial schools or in school workshops for annual training. The course shall extend over three years, during which time the students shall be prepared for the highest technical examination in cabinet-making, or carpentry, or fitter's work. The students shall ordinarily work in the workshop for thirty-five hours per week and will be allowed one month's vacation and the ordinary authorized holidays. The stipends may be reduced or forfeited for misconduct, idleness or want of progress. The stipendiaries shall be required, if need be, to serve for two years, and to submit half-yearly reports as to how they are employed for three years after leaving the workshops."

The Principal of the College of Engineering (Mr. James) informed the sub-committee that the average number of suitable applications which he receives for stipends is only one about every alternate year, so that the existing provision for the training of teachers is not taken advantage of.

The sub-committee was of opinion that the stipends might be increased in value.

The sub-committee was of opinion that it is very desirable to employ only first class craftsmen as teachers.

The sub-committee was further of opinion that the ordinary craftsman is improved by a course of training in methods of instruction.

10. The meeting adjourned with a view of meeting again some time before the 1st of November in order that the report of this sub-committee might be sent to the Secretary before the 1st November.

11. Meantime the above tentative conclusions were reached by the sub-committee.

III-C

Proceedings of the Sub-Committee on Apprenticeships.

The second meeting of the sub-committee was held at the office of the Director of Industries on Friday, the 10th November 1922.

P R E S E N T :

W. Fyfe, Esq. (convener).

M.R.Ry. R. T. Kesavalu Pillai (member).

Mr. Wright, representing Messrs. Parry & Co., was also present.

Mr. Wright, representing Messrs. Parry & Co., was also present. Apologies for absence were read from Mr. T. C. Srinivasa Ayyangar, Mr. M. A. Walker and Mr. Ibrahim Sait. Letters were read from various firms who had been addressed by the Secretary.

Some of the engineering firms did not consider fresh legislation necessary and appeared to be satisfied with things as they are. Other firms, particularly those in the printing trade, consider that the present Apprenticeship Act requires considerable remodelling. From the evidence before them the committee are of opinion that it is desirable to institute a system of apprenticeship in those trades where no such system at present exists. Where a more or less haphazard system of apprenticeships exists the committee considers that something should be done to regularize such systems and get them on proper lines. The committee considered that the present Apprenticeship Act is altogether useless, but that an Apprenticeship Act of some sort is very desirable. They consider that the present Act should be remodelled to provide for the binding of apprentices to serve their employers while living with their natural parents or guardians. They consider that the employers should be bound to teach the apprentice his trade, but should not be expected to feed, clothe or house him. They further consider that it is very desirable that the Act should provide severe penalties for persons knowingly enticing away a bound apprentice or knowingly employing a bound apprentice without the consent of his previous employer.

III-D

Secretary's note for the use of the Sub-Committee on 'Scholarships'.

The following is a brief enumeration of the existing facilities afforded by the Department of Industries for various grades of Industrial training.

1. *State Technical Scholarships*.—The number of scholarships tenable in Europe at any one time has been fixed at 8 *—value £200 25 per cent war bonus. A copy

* Prior to 1920, the number was only four. In this year the Local Government, on the recommendations of the Finance Committee of 1919, added four more. Thus the number of scholarships available to natives of this Presidency now remains at eight.

† Not printed.

invited for nominating suitable persons. Of the remaining two scholarships, the recipient of one has recently sailed for England and the recipient of the other in whose case the award has been kept in abeyance is still in India pending the conclusion of arrangements which the High Commissioner is trying to make for his training. The following table exhibits the number of scholarships that have been awarded since 1906 for the study of different Industrial subjects. This table excludes the two scholarships that are now vacant and the two scholarships the recipients of which have not yet actually begun to undergo training—

Subject for the study of which awarded.	Number of scholarships that has so far been awarded.
(1) Leather Industry ...	1 + 1 + 1 + 1 = 4
(2) Textile Chemistry as applied to dyeing, bleaching and printing of textile fabrics ...	1
(3) Chemistry of Soap-making and the use of native oils ...	1
(4) Metallurgy ...	1 + 1 = 2
(5) Weaving and Textile Manufacture ...	1 + 1 + 1 + 1 = 4
(6) Electrical Engineering (including Hydro-electrical Engineering) ...	1 + 1 + 1 + 1 = 4
(7) Locomotive Engineering (including Hydro-electrical Engineering) ...	1

2. *Scholarships tenable at the Indian Institute of Science, Bangalore* (First instituted in 1919)—*Object*.—To provide adequate facilities for the technical training of well-educated young men of the Presidency for employment in Chemical Industries to meet the demand for trained Industrial Chemists.

Number that can be held at any one time.—Fifteen. Value—Rs. 60 per mensem. Travelling allowance paid when joining and leaving at the commencement and conclusion of course respectively.

Departments in which the scholarships are tenable:—

- (1) Department of Applied Chemistry.
- (2) Do. Bio-Chemistry.
- (3) Do. Electro-Technology.

Conditions of award.—Scholarships normally tenable for two years but may be terminated at the end of the first year and in special cases may be extended for a third year on the recommendations of the Senate of the Institute. Preference given to men with Post Graduate training and Honours Graduates. Selected scholars must reside in the hostel attached to the Institute. Scholarships are liable to discontinuance at any time in the event of the Director receiving adverse reports regarding a scholar's progress or conduct.

3. *Number of scholarships that has so far been awarded*.—Including the nominations made during the current year the number of scholarships that have been awarded since the inception of the scheme in 1919 is eighteen. Of these, ten are now undergoing their course in the Institute and the rest have after varying periods of stay been allowed to resign in order to enable them to take up suitable appointments as were offered them.

4. *Scholarships tenable at the Victoria Jubilee Technical Institute, Bombay*—*Object*.—To provide facilities for students of this Presidency to undergo technical training in an existing and well-equipped institute in India; first instituted in 1914.

Number of scholarships available for award every year.—Six. Value—Rs. 60 per mensem. Travelling allowance paid when joining and leaving at the commencement and conclusion of the course respectively.

Minimum qualifications required of applicants.—Possession of Secondary School Leaving Certificates.

Period of course.—Four years.

Subjects for the study of which the scholarships are now awardable—

- (1) Technical and Applied Chemistry.
- (2) Sanitary Engineering and plumbing.
- (3) Textile Manufacture.

Before 1918 these scholarships were also awarded for the study of Mechanical and Electrical Engineering.

Conditions of award.—Selected candidates should pass the Entrance Examination held at the Institute. They will be required to produce satisfactory evidence of the consent of father or guardian to proceed to Bombay, of good character and of physical fitness to undergo the course of life and study that will have to be followed. Holders of scholarships will not be bound by any engagement to serve Government on the completion of their course nor will the Government be bound to employ them. Each holder will be required to find two sureties to execute an agreement for Rs. 2,880.

The following table shows the number of scholarships that have since 1918 been awarded, the number who have completed their training and the number who are now in the Institute. This statement includes the scholarships awarded this year:—

Number of scholarships awarded since 1918—10. Number of recipients who have completed their training—2. Number of students who are in the Institute—8.

The subjects for the study of which they have been awarded are as follows:—

- (1) Textile Manufacture—6.
- (2) Technical and Applied Chemistry—2.
- (3) Sanitary Engineering and Plumbing—2.

Industrial School Scholarships.—A copy of the printed notification * which gives full particulars about these scholarships is appended for the information of members.

The Sub-Committee on Scholarships has to deal with the question of grant of Technical scholarships within or without the Presidency and the conditions of such grants. From the point of view of the Department of Industries the facilities detailed above cover for most practical purposes all our present requirements. The Inspector of Industrial Schools has, however, suggested that it would be of advantage if the Director of Industries had a freer hand to place scholars in any suitable institutions, not necessarily those indicated above. For example, he suggests that Weaving Superintendents for industrial schools and weaving parties trained at Serampore might in some cases be more suitable than men trained at Bombay, and he wishes a ruling from Government to the effect that the Director of Industries might recommend that a scholarship be tenable at Serampore instead of Bombay. Similarly, he has suggested that some use might be made of the College at Sibpur and two scholarships made available there. It is understood that the curriculum of this Engineering College has recently been revised to provide a two years course to follow a practical apprenticeship of not less than three years for youths of good general education, and the Inspector of Industrial Schools suggests that one such scholarship should be given for competition amongst the better educated apprentices attending the Madras Trades School and another scholarship for competition amongst the apprentices in the Railway branch of the Trades School, Perambore. It might be advisable before making definite recommendations to Government with regard to these institutions two institutions and to collect information regarding the courses, available and their suitability to the requirements of this Presidency and also, of course the willingness or otherwise of the authorities of these particular institutions to admit scholars, if nominated by the Madras Government. It has further been suggested that scholarships should be more freely given to cases judged entirely on their merits. In this connexion it may be mentioned that a scholarship of Rs. 60 per mensem was awarded

tenable in the Government Leather Trades Institute, Madras, this year in place of one of the scholarships ordinarily tenable in the Indian Institute of Science. Later still the Bishop of Dornakal recently approached Government through the Department of Industries with a request for a small scholarship of Rs. 120 in all for each of two boys whom he was sending to the Central Provinces for a course of training in shoe-making and leather goods manufacture. Government sympathetically considered this application and the Bishop's request has been granted. It was possible to find the funds from savings, but it is suggested that much value might be got from a more liberal interpretation of the present rules and the grant of scholarships of this nature, each case being considered entirely on its merits. If the committee supports this suggestion it may be advisable to recommend to Government that the ordinary allotment for scholarships tenable in India be augmented in future by a sum to be expended on miscellaneous scholarships of this nature.

III-E

Proceedings of the Sub-Committee on Scholarships.

PRESENT:

- (1) C. W. E. Cotton, Esq., C.I.E., I.C.S., M.L.O. (convener).
- (2) M.R.Ry. C. Ramalinga Reddi Avargal, M.L.O.
- (3) " S. Arpudaswami Udayar Avargal, M.L.O.
- (4) " Y. Ranganayakulu Nayudu Garu.

State technical scholarships.—The sub-committee are of opinion that the number of scholarships tenable in Europe at any one time might be raised from eight to ten, if duly-qualified candidates are forthcoming, but they would deprecate any lowering of the standards of eligibility merely in order to fill the additional places now proposed.

In view of the difficulties experienced in obtaining facilities for study in the United Kingdom, the possibility of sending candidates occasionally to the continent or America if proper arrangements could be made through the agency of H.B.M.'s Diplomatic or Consular service for the supervision of the students enjoying the scholarships and the language difficulty on the continent can be overcome. Advantage might perhaps be taken of the present psychological situation in Germany to secure admission into technological institutes or into industrial concerns themselves in that country.

A record should be maintained showing the subsequent career of every scholarship holder as used to be done in the Education Department for all Government of India scholars.

Scholarships at the Indian Institute of Science.—The sub-committee do not consider that any increase in the number of scholarships tenable at this institute is necessary at the present time, but they are of opinion that having regard to the greater prospects of employment for students working to a prescribed syllabus, at least two scholarships should be earmarked every year hereafter for candidates who offer themselves for the study of electrical technology. The sub-committee see no reason why bonds should not be required from scholarship holders at the Indian Institute of Science as are required from scholarship holders at the Victoria Jubilee Technical Institute, Bombay.

Scholarships at the Victoria Jubilee Technical Institute.—The sub-committee are of opinion that the maximum number of scholarships to be held at this institute at any one time should be fixed at 20 and they consider that electrical engineering should be added to the list of subjects for the study of which scholarships may be awarded.

With regard to the scholarships tenable both at the Victoria Jubilee Technical Institute and the Indian Institute of Science, the sub-committee are of opinion that the Department of Industries might indulge in a little more publicity as to the facilities which exist for training at these institutions by sending scholarship prospectuses to the Principals of all the Secondary schools in the provinces to be posted up in a prominent place on their notice boards.

Industrial schools scholarships.—The sub-committee have no alterations to suggest either in the amount or in the number of scholarships at present awarded in aided industrial schools. With the suggestions of the Inspector of Industrial Schools contained in the memorandum which he has prepared for the use of the sub-committee they are in general agreement, but they would prefer to defer making any definite recommendations either about scholarships at Serampur or at Sibhur until one or more of their members have visited these institutions. They consider that at the same time the question of the grant of the scholarships in Ceramic branch of the Sir J. J. School of Art at Bombay might also be looked into. The convener and Mr. Ramalinga Reddi expressed their willingness (subject to the concurrence of the Chairman) to visit Bombay and Calcutta in the course of next week and it was decided not to complete the report of the sub-committee until after their return when the remaining members have had the opportunity of considering the opinions expressed by them as a result of their visit.

The sub-committee strongly support the suggestion that a sum of Rs. 3,000 should be provided annually in the budget of the Department of Industries for scholarships to be awarded at the discretion of the Director of Industries in the field of industrial and technical education not strictly falling under any of the foregoing heads.

The sub-committee are strongly of opinion that no scholarships should be awarded to subjects of Native States adjoining the Madras Presidency.

IV

Proceedings of the Second General Meeting held at Fort St. George at 11 a.m. on Saturday, the 11th November 1922.

PRESENT:

- M. E. Couchman, Esq., I.C.S. (President).
 W. Fyfe, Esq. (Secretary).
 The Director of Public Instruction, Madras.
 The Director of Industries, Madras.
 The Rev. B. Rottschaeffer.
 M.R.Ry. M. K. Dandekar Avargal (co-opted).
 Khan Bahadur Muhammad Sadulla Badsha Sahib Bahadur, M.L.O.
 M.R.Ry. C. Ramalinga Reddi Garu, M.L.O.
 " T. C. Srinivasa Ayyangar Avargal, M.L.O.
 Dr. P. Subbarayan, M.L.O.
 The Principal, Engineering College, Madras.
 M.R.Ry. R. T. Kesavalu Pillai Avargal, M.L.O.
 " Y. Ranganayakulu Nayudu Garu.

The reports on "Commercial education", "Weaving schools", "Technical education", "Apprenticeships" and "Scholarships" having been already circulated, the meeting proceeded to consider these reports in detail. In some cases the meeting did not accept the recommendations of the sub-committee in their entirety and where there was such difference of opinion the matter was discussed in detail. The following decisions were finally arrived at.

Commercial education.—It was accepted that commercial education should remain under the Department of Public Instruction. With reference to existing institutions it was agreed (a) that the present Institute of Commerce should be developed into a commercial college to prepare students for a degree in commerce when that has been established and (b) that it is desirable to include commerce as an optional subject in group 3 of the Intermediate course. This is understood to be in consonance with the recent recommendations of a sub-committee of the Senate of the Madras University. It was further accepted that the system of teaching commercial subjects in secondary schools should be encouraged and that such secondary school instruction should lead up to the Intermediate examination. It was further accepted that continuation classes should be started in various centres throughout the Presidency to provide a training in commercial subjects for persons who have left.

school and are engaged in occupations where a knowledge of such subjects would be of value. The time-table of such classes should be arranged to fit in with the ordinary working hours of the students, the classes being held in the mornings or afternoons. Such classes should be recognized and aided by Government on conditions which will ensure that the teachers are properly qualified and that the equipment is modern and sufficient. Such classes should prepare students for the Government Technical Examinations and should meet the existing need for instruction in commercial subjects, the existing facilities for which the committee consider scarcely adequate.

Mr. Ramalinga Reddi proposed that in addition to the classes contemplated above a more elementary form of commercial instruction should be provided in the vernacular in certain areas, particularly where the spread of co-operation seemed to warrant such instruction. After considerable discussion this proposal was put to the vote and lost on the Chairman's casting vote.

Paragraph 4.—It was accepted that, for the reasons given in the sub-committee's report, there is no need to prepare syllabuses.

Paragraph 5.—The sub-committee recommendations that the findings of the Committee on technical examinations referred to in paragraph 2 of G.O. No. 528 with regard to the minimum standard for admission to these examinations should be accepted as the standard of admission to the continuation classes outlined above was also accepted. It was agreed that it is unnecessary at present to provide special facilities for the training of women and girls in commercial schools as it is open to them to take advantage of existing facilities.

Weaving Schools.—With regard to the report of the sub-committee on "weaving schools" the meeting accepted the recommendations of the committee that (1) such schools should be under the control of the Department of Industries; (2) the admission to the higher course of studies in the Government Textile Institute, Madras, should be ordinarily restricted to those who have completed the lower secondary course, but that exceptions should be made in the case of those who have not reached that standard provided they satisfy the Superintendent that they are in a position to benefit by the training provided; (3) in the case of the lower course in the same institute and in any industrial schools where weaving is taught, it was agreed that admission should, as a general rule, be restricted to those who have completed their lower elementary school course.

With regard to the recommendations of this sub-committee that weaving sections might with advantage be attached to elementary schools in large weaving centres, there was a considerable amount of discussion. The matter was finally put to the vote and lost by the chairman's casting vote.

Technical Education.—The meeting accepted the recommendation of the sub-committee that technical and higher technological education (including engineering training) should remain under the control of the departments now concerned with them.

The meeting agreed with the sub-committee that the College of Engineering at Guindy should be expanded in due course and developed into a technological institute.

It was accepted that research could be undertaken in existing laboratories for example laboratory of the College of Engineering, Guindy, Presidency College, Madras, and of the Agriculture College, Coimbatore. The meeting further agreed that the Local Government ought to come to some arrangement so that the Indian Institute of Science at Bangalore might be utilized for chemical research as applied to industries.

It was accepted that technical education being post matriculate, education should be developed in existing institutions by providing if need be additional courses and the provision in such institutions for facilities for research work as problems arise.

It was agreed that the qualification for admission into a technical or technological institute should ordinarily be the intermediate standard of the University, but provision should be made for allowing for exceptions to this rule in the case of persons who have practical training in the profession which they wish to study and who have

sufficient general education to profit by the course of instruction provided. It was accepted that technical instruction should not be imparted in the ordinary schools for general education. It was agreed that the present arrangement for training teachers of carpentry or black-smith's work in the College of Engineering at Guindy might be discontinued as suitable facilities for such training can be made available in aided schools under the control of the Department of Industries.

Apprenticeships.—The recommendations of the sub-committee dealing on this subject were accepted without discussion.

Scholarships.—The recommendations of the sub-committee regarding State Technical Scholarships, Scholarships in the Indian Institute of Science, Scholarships at the Victoria Jubilee Technical Institute and Industrial School Scholarships were accepted.

Extra scholarships.—The meeting agreed that it is desirable to institute scholarships tenable at Serampur Weaving Institute and at Sibpur Engineering College and considered that for the present two scholarships every year should be made available at Serampur and one at Sibpur. These scholarships should be of the same value and on the same conditions as those at present tenable at the Victoria Jubilee Technical Institute, Bombay. The meeting further agreed that if suitable candidates are available it is desirable to grant one scholarship every year tenable in the Ceramic branch of the Sir J. J. School of Art, Bombay, of the same value and on the same conditions as those suggested for Sibpur and Serampur.

The meeting agreed that it is desirable that a sum of Rs. 3,000 should be provided annually in the budget of the Department of Industries for unforeseen expenditure under scholarships not directly falling under any of the foregoing heads. The sub-committee's view that scholarships from Provincial funds should not be awarded to subjects of native states adjoining the Madras Presidency was endorsed.

Women's work.—The meeting agreed to appoint the following sub-committee to deal with this subject:—

Miss Tweddle of the Wesleyan Mission, Ikkadu (convener).

Members.

Mrs. Subbarayan.

Mrs. Devadoss.

M.R.Ry. C. Ramalinga Reddi Garu, M.L.C.

It was agreed to consider the report of the sub-committee on "industrial schools" and other business at the next meeting to be held at 11 a.m. on the 22nd instant at the office of the Board of Revenue.

V

Proceedings of Sub-Committee on Women's Work.

Proceedings of the meeting held on the 20th November 1922 at the office of the Director of Industries, Madras, at 4-30 p.m.

Present:

Mrs. B. M. Tweddle (convener),

Mrs. Radhabai Subbarayan, and

Mrs. Devadoss.

1. The sub-committee consider that any organization for the provision of technical and industrial education for women and girls should be under the control of the Department of Industries.

2. A separate sub-committee is dealing with this question.

3. The sub-committee consider the following subjects as suitable for women and girls:

Spinning and weaving, lace, embroidery, drawn thread work, plain needle work, mat-making, basket-making, knitting (hosiery), leather-modelling, book-binding, toy-making, button-making, crochet work, and domestic economy (specially laundry).

The sub-committee consider the first four subjects of prime importance.

For the provision of instruction in the above subjects the sub-committee consider that a school-cum-factory type of institution is most suitable. Such institutions should act as central depots and buying and selling agents. The recruits for the industry should be trained at the central depot and employed, after training, in the depot or, if they prefer it, and if the nature of the work is suitable they should be allowed to work in their homes on piece-work rates. In large centres such as Madras it will be necessary to have sub-agencies or subordinate depots convenient to the houses of the workers. The sub-committee consider that particular attention will be required to be given to the development of the selling side of these depots. For example, the central depot should be in a position to develop an extensive export trade in certain of these lines.

The sub-committee consider that the teaching staff employed at these central and subdepots should be entirely ladies.

4. The sub-committee consider that it is not desirable at present to draw up a curriculum for these institutions. The curriculum can very well be left to the heads of the institutions concerned assisted by the officers of the Department of Industries.

5. No fixed educational qualifications can be laid down; but the pupils should have sufficient general education and be sufficiently intelligent to benefit by the instruction provided.

6. The sub-committee consider that all the subjects mentioned above are suitable for inclusion in the curriculum of elementary and secondary girls schools.

7 & 8. Separate sub-committees are dealing with these questions.

9. Where a school or a central depot is sufficiently organised on the teaching side, the pupil-teacher system of training teachers might be introduced but where the number of pupil-teachers in one institution is more than six, special facilities should be provided for giving them instruction in methods of teaching on modern lines.

10 & 11. Separate sub-committees are dealing with these questions.

12 & 13. This sub-committee endorse the views of the sub-committee on 'Industrial Schools'.

14. The sub-committee is informed that the raw material used in several of the industries detailed above particularly lace thread (linen) is subject to a heavy import tax. The sub-committee consider that measures should be taken to relieve the industry of this burden.

V-A

Secretary's Note for use of Sub-Committee on Industrial Schools excluding Schools of Weaving.

I append herewith a list showing the industrial schools in this presidency assisted by this department as well as the subjects taught in each and the number on rolls on 31st March 1922. In my capacity as Inspector of Industrial Schools, I have had occasions to criticise the work of each school individually especially at the time of my annual inspection of them. I do not consider, however, that such reports will be of much use to this sub-committee whose work will not permit their going into the details of each school. I have already forwarded to the members with my letter No. 248 C, dated the 11th May 1922, a copy of my article on 'Industrial Education in the Madras Presidency'. Appended to this note are a note written by the Director of Industries for the Hon'ble the Minister of Development at the time of his opening the Industrial Schools Exhibition held in January last and an extract from the administration report of this department for 1921 which contains some general remarks on the industrial schools aided by this department and also a short paragraph on a few of the more important institutions among them. An extract from a note written some time ago and in which the idea of the establishment of a Government industrial school in each of the large language areas of this presidency was for the first time suggested is also attached.

The question of making permanent and strengthening the staff of the Madras Trades School was also raised some time ago but the Government deferred consideration of the matter as they thought that the recommendations of this committee might

affect among other matters the future of the Trades School also. They therefore decided to hold over the question until after the receipt and examination of the report. It will thus be seen that it is desirable for the members of the committee in general and those of this sub-committee in particular to visit the school while at work at their individual convenience in order to acquaint themselves with the work done. The Superintendent of the school has accordingly been warned to expect the members of the committee to visit the institution in working hours (5 p.m. to 7 p.m. most suitable) and to see that they are shown around. The telephone number of the school is 5193 and members are advised to ring up the Superintendent before visiting the school so that he may arrange to meet them in person. As the Director of Industries and myself are both on this sub-committee, detailed notes regarding the Madras Trades School and its organization have not been prepared but either of us will doubtless be able to furnish the members with any information they may require at the meeting of the sub-committee.

ENCLOSURES TO SECRETARY'S NOTE.

(i)

Extract from a Note in which the idea of the establishment of an Industrial School in each of the language areas of this Presidency was first suggested.

As matters stand we have the Madura Industrial Institute and numerous aided industrial schools in the south but very few facilities outside the Tamil districts. On the west coast we have no schools at all except works classes attached to the Commonwealth Trust workshops at Mangalore either Government or assisted. In the ceded districts we have one girls' school at Bellary and another small girls' school at Koduru. In the east coast districts north of Madras, we have assisted schools at Ongole, Vizagapatam, Guntur and Parlakimedi, and the unassisted school at Masulipatam, which whatever its politics, is turning out men capable of looking after running machinery.

Local bodies are now beginning to exhibit more interest in industrial education but few of them are in a position to finance schools of their own. The only industrial school we have at present conducted by a local body is the Municipal Industrial school at Guntur and up to date as indicated above it is making little or no headway. When local bodies consult me with regard to industrial education the obvious course is to recommend them to institute a few scholarships or stipends to maintain a few students nominated by them at existing institutions, in preference to launching out on schemes for industrial schools of their own, but the Industrial Institute at Madura is the only Government institution available for such stipendiaries and lads from the west coast and the Andhradesa are most unwilling to proceed to Madura for training. It is true that most mission schools are willing to admit stipendiaries from the local or district boards but the Inspector of Industrial Schools notes a decided and not unnatural reluctance on the part of Muhammadans and caste Hindus to avail themselves of the instruction provided in Christian mission institutions with the disabilities attaching to the hostel accommodation provided.

I feel very strongly that an industrial school conducted by Government is urgently required for each of the three principal language areas, Telugu, Malayalam, Kanarese, if the local bodies are to be provided with reasonable facilities for industrial education for their nominees and stipendiaries.

The west coast and ceded districts would thus appear to have a claim for attention at least as strong as the claims of the circars and as a matter of fact I believe that Government are committed in G.O. Mis. No. 1413, Education, dated 12th December 1914, to establish an industrial school on the west coast. If funds were plentiful I should recommend therefore, the establishment of Government industrial schools at Cannanore, Bellary and Bezwada as I find that as a general rule non-Tamils simply will not resort to Madura for training and if they did it would be difficult to find vacancies for them in the institute there. If we are to aim then at establishing schools at or near the places mentioned above our next consideration

must be whether we can with the funds in hand start three such schools in one year or one at a time. If I had any indication of the amount of money likely to be available for the establishment of new industrial schools, I could then begin to shape my programme, but in the absence of any such indication I can only grope in the dark.

I may, however, assume that the amount available will not be large and that any programme I propose will have to be worked out on as economical lines as possible. The scheme proposed by Mr. Campbell for Bezwada is estimated to cost just over 3½ lakhs for capital expenditure but if land has to be bought and if a few of the old subjects since suggested for inclusion are taken up I fear that five lakhs would be a conservative estimate for non-recurring cost and anything up to one lakh per annum for recurring charges. I personally cannot see any hope of Government sanctioning such an expensive scheme for the Circars only and if Rs. 5 lakhs be obtained, I think, it should be spread out and an attempt made on less ambitious lines perhaps to cover more ground.

If we aim at three schools as suggested above our next consideration must be the size and scope of these three schools. As a starting point I think we may take it that the principal requirements of all three areas are the same although in minor details they differ. All three areas require well trained carpenters, well trained smiths with an elementary knowledge of turning and fitting, well trained motor-car drivers and well trained engine tenders. Some of the areas may require a few tanners, some a few dyers, some weavers, and so on by if we can establish three schools to provide in the first instance the training common to all the three areas, we shall make a big stride forward and can consider the subsidiary subjects later on when the schools are on firm footing.

To establish one such school I would require land (10 acres) which may vary in value—

	RS.
Buildings (school and workshop) costing about	1,75,000
Quarters	20,000
Machinery, tools and plant	80,000
Three engines of different types	50,000
Three motor-cars	20,000
Total non-recurring expenditure ...	3,45,000 exclusive of land
Say ...	3,50,000

and for recurring charges about Rs. 1,00,000 which would be reduced by receipts about Rs. 30,000 net. Each of these three schools would thus cost about 3½ lakhs to start excluding the cost of land and about 1 lakh per annum to maintain.

The next question is whether taking advantage of local circumstances it would be possible to reduce the initial cost in any way. At Cannanore I should imagine that Government land would be available and possibly some of the military buildings could also be made available. At Bellary again a military site might be obtained with more or less suitable buildings, or in a few years it may be that the present extra Central Jail at Bellary could be diverted to the purposes of an industrial school. If existing buildings more or less suitable could be utilized at either of these places, it would materially lessen the first cost and might considerably shorten the time required for carrying out of our programme.

(ii)

Copy of a note written by the Director of Industries for the Hon'ble Minister for Development at the time of his opening the Industrial Schools' Exhibition.

The control of industrial education was finally vested in the Department of Industries in 1914 and an Inspector of Industrial schools was appointed in 1916 to take charge of the educational branch of the Department's work. Unlike other parts of India, industrial education in this Presidency is chiefly imparted by aided institutions, the Institute at Madura, the Trades School in Madras and the Leather Trades Institute at Washermanpet being the only examples of Government institutions

engaged in industrial education. The Department of Industries assists with grants-in-aid and advice no less than 40 industrial schools in Madras and the mufassal. Many of these assisted schools are located in very out-of-the-way places and are seldom heard of by the general public. The managers often find it very difficult to obtain good orders for the work turned out by their artisans, though it is very necessary to do so in order to reduce the cost which in the majority of cases falls upon mission funds. As an example of what can be done by an enterprising school manager, I would refer to the furnishing of the Adyar Club which was executed by the American School at Katpadi; but it is given to few schools to find or create such opportunities. It is in order to acquaint the Madras public and the large number of people who have come to Madras in connexion with the visit of the Prince of Wales with the volume and variety of work turned out by these industrial schools in all parts of the Presidency that this exhibition is being held. While before the Reforms came into force, the general public took little interest in the details of departmental working, the man in the street is now day by day more inquisitive as to what is being done with Government money in every branch of the administration. This exhibition is intended to fulfil the further object of showing the tax-payer what the State is obtaining in the way of improved industrial training for the money spent on grants-in-aid. A special feature of the exhibition is the demonstration of weaving by the pupils of the C.M.S. Industrial School for the Blind at Palamcottah. The Principal of the School, Mr. Speight, was to lecture to-morrow (Wednesday 11th) under the auspices of the Publicity Bureau on 'The place of the Blind in the Industry'. Unfortunately owing to illness he has been obliged to cancel the engagement. Another exhibit which will doubtless attract a large share of attention is an exhibit of the work undertaken by the lads of the class attached to P. Orr & Son's Works School. Mr. Binstead, the Works Manager, is not one of those who hold that little can be done to improve the Indian workmen. He has shown in this class, which by the way he teaches himself, that the Indian artisan is very receptive of instruction. He has also found by experience that the improvement is greatest when the artisan is caught young. As an adjunct to the exhibition, a large pandal has been erected in the compound of the office of the Director of Industries, Commander-in-Chief's Road, where different types of improved weaving apparatus evolved by the textile expert and for the most part lately exhibited at Patna are on view. These special exhibits of weaving apparatus will be open to the public for two months so as to enable heads of industrial schools where weaving is taught, owners of small weaving factories and other interested parties to inspect the machines at their leisure and make arrangements, if they wish, to have particular items copied. It is hoped later on that it may be possible to have in Madras a permanent demonstration hall for looms and also for machines for the preparatory processes where different improvements as effected can be tried and tested and arrangements made with local contractors to manufacture duplicates of those which prove their worth.

(iii)

List of aided industrial schools, excluding schools of weaving.

Serial number and name of institution.	Subjects taught.	Number on rolls on 31st March 1922.
1. Raja's Industrial School, Parlakimedi (Ganjām district). *	Carpentry	38
2. St. Aloysius Industrial School, Vizagapatam ...	Motor-car fitting ...	16
3. A.B.M. Girls Industrial School, Ongole ...	Embroidery and drawn thread work.	15
4. Municipal Industrial School, Guntūr ...	Carpentry	5
5. O.E.L.M. Lace Making School, Koduru (Cuddapah district). ...	Lace	19
6. St. Joseph's Girls industrial School, Bellary ...	Embroidery and general needle-work.	72
7. U.F.C.M. Lace School, Chingleput ...	Lace	58
8. U.F.C.M. Agricultural School, Melrosapuram (near Chingleput). ...	Agriculture	38
9. A.A.M. Industrial School, Vellacherri (near St. Thomas' Mount). ...	Carpentry and motor-car driving.	32
10. A.A.M. Industrial School, Katpadi ...	Cabinet-making ...	51
11. A.A.M. Women's Industrial Home, Ranipet (North Arcot district). ...	Lace embroidery and general needle-work.	40

* Weaving is also taught in this school.



List of aided industrial schools, excluding schools of weaving—cont.

Serial number and name of institution.	Subjects taught.	Number on rolls on 31st March 1922.
12. Anjuman-I-Isba-A-Thul-Hassanath, Vellore ...	Carpentry ...	47
13. Anjuman-I-Mufidul-Islam Muhammadan Orphanage (Melvisharam near Vellore) ...	Do. ...	16
14. St. Joseph's Industrial school, Coimbatore ...	Carpentry and motor-car work.	81
15. L.M. Girls Industrial school, Erode ...	Mat-making and fibre work.	39
16. D.M. Girls Industrial school, Keelur (South Arcot district) near Tirukoilur.	Lace work ...	20
17. D.M. Industrial school, Panruti (South Arcot district) (a).	Carpentry ...	47
18. St. Joseph's Industrial school, Tindivanam (South Arcot district) (b).	Do. ...	55
19. St. Francis Xavier Industrial school, Tanjore (c).	Carpentry ...	65
20. St. Mary's Industrial school, Kumbakonam ...	Carpentry and black-smithy.	55
21. Wesleyan Mission Industrial school, Karur (Trichinopoly district).	Do.	69
22. Wesleyan Mission Lace school, Karur ...	Lace ...	11
23. St. Joseph's Industrial school, Trichinopoly ...	Carpentry, smithy and mechanics work.	57
24. S.P.G. Industrial school, Puttoor (near Trichinopoly).	Carpentry ...	12
25. C.S.M. Girls Industrial school, Kempstown (near Trichinopoly).	Lace and embroidery.	22
26. St. Joseph's Convent Girls Industrial school, Madura.	Embroidery ...	64
27. R.C. Lace school, Vedakangulam (Tinnevely district).	Lace making and embroidery.	73
28. The Hindu Girls Lace Industrial school, Kudangulam (Tinnevely district) (d).	Lace ...	...
29. S.P.G. Art Industrial school for Boys and Girls, Nazareth (Tinnevely district) (a).	Carpentry, black-smithy and lace.	64 + 12 = 76
30. S.P.G. Girls Industrial schools, Idayangudi and Kudangulam (Tinnevely district).	Lace ...	59
31. O.N.T. Institute, Vepery (a) ...	General mechanics, wood work, black-smithy and motor-car driving.	187
32. Anjuman-I-Mufid-Abla-I-Islam, Mount Road, Madras (e).	Carpentry ...	130
33. C.S.M. Girls Industrial school, Kilpauk, Madras.	Lace and embroidery.	77
34. The Orr Assisted Industries school, Madras ...	Scientific instrument and tool making.	19
35. The Addition Assisted Industries school, Madras (d).	Printing trades ...	...
36. The Cole's Vocational Middle school (Kurnool) (f).	Agriculture and carpentry.	...

(a) Weaving is also taught in this school.

(b) There is a training section for teachers of carpentry attached to this school.

(c) Weaving is also taught in this school. A section for making of brushes is being organized.

(d) Recently recognized.

(e) Carpet weaving is taught in this school.

(f) Recently recognized. Weaving is also taught in this school.

(iv)

Extract from the Administration report of this department for 1921-22.

Aided Industrial schools.—In this Presidency Government institutions for industrial education are few and the spread of industrial education is catered for largely by aided institutions. The public do not perhaps realize how much they owe in the field of industrial education to missionary labours and mission funds. During the year under review there were 38 such assisted industrial schools scattered throughout the Presidency, many of them located in out-of-the-way places and a few of them seldom heard of by the general public. These assisted schools provide a reasonably efficient form of trade instruction at an extremely low cost to Government. They

are conducted by very differently constituted bodies who approach the end in view from different angles and in different ways. The schools require a frequent, careful and withal tactful inspecting agency in order to keep them up-to-date in methods and in efficiency, but they fill a real need and accomplish work which could not be accomplished by purely Government institutions except at a very high cost to the State.

The year under review has been a period of stress and strain for most of these institutions. Owing to the financial stringency Government have not been able to allot funds under grant-in-aid for the construction of new buildings which are urgently required by several aided schools, whilst grants-in-aid for the purchase of equipment have also had to be cut down to the absolute minimum. The concerns which belong to foreign missions have been hard hit by the continental exchanges; while the cost of conducting the schools has increased and the managers of several of these institutions have had, and are having a very anxious time indeed.

During the year, the number in training in assisted schools was 1,748 and the recurring teaching grant-in-aid amounted to Rs. 53,467, whilst a sum of Rs. 33,451 was spent on non-recurring building equipment grant. It is impossible to deal in this report with all these aided schools in detail, but some outstanding particulars of a few of them are given below.

The Addison Press Industrial school.—Government have agreed to support with grant-in-aid a set of classes for the apprentices employed in the Addison Press. The classes will be conducted on the same lines as those of the Orr assisted Industrial school, which, it is hoped, will prove popular generally with employers of labour.

St. Mary's Industrial school, Kumbakonam.—Had a very successful year. The number in training increased from 40 to 55 and the value of the work turned out from Rs. 14,000 to Rs. 24,000. The work done covers a wide range, from fine cabinet-making to heavy and elaborate roof construction. The accommodation is now very fully taxed and it is greatly to be regretted that Government have not been able to meet the request of the management for a grant-in-aid towards fresh buildings urgently needed.

St. Joseph's Industrial school, Coimbatore.—Has not suffered so much financially as some other institutions and the management have been able by hard work and careful management to complete a fairly large building programme without Government assistance. The new building makes possible a rearrangement of the different departments which the Inspector of Industrial schools has urged on the manager's attention during recent years as a means towards greater and more efficient supervision of the details of the work. The staff has been strengthened by the appointment of a carpentry teacher from the training section of the St. Joseph's Industrial School, Tindivanam, and of an ex-pupil of Bro. Emile at Vizagapatam as teacher of motor-car repair work. The Rev. Fr. Perrin, after a long period as manager of this school, a period which was only interrupted by a spell of duty as interpreter with the British forces in France, has found it necessary owing to failing health to resign his post as manager but his place has been taken by the Rev. Fr. Beyls, who acted as his assistant and colleague from 1909 to 1914.

St. Joseph's Industrial school, Trichinopoly.—Continued to do good work during the year in providing training in cabinet-making and metal work. A hostel is very urgently required for this institution but Government have not been able to provide a building grant-in-aid and the finances of the school do not permit of the management attempting the erection of hostel buildings unaided.

St. Joseph's Industrial School, Tindivanam.—This school had a very busy year. A new building for the use of the Training section for teachers of cabinet-making attached to this school was completed and occupied during the year and is being found of great convenience and assistance in the work of training teachers. A no less important item of construction was the erection during the year of quarters for the European staff of the school. For seventeen years the French Lay Brothers who form the teaching staff had to be content to live in a screened-off portion of the boys' dormitory and the two-storey bungalow now provided for them was long overdue. In January the manager, the Rev. Brother John Baptiste, who founded the school eighteen years ago and has been in charge of it without a break ever since, proceeded

home to France on furlough. His health has been very indifferent for some time, but I trust that a long vacation in his native land will enable him to return to Tindivanam with his old time vigour and energy to inaugurate a new era of prosperity.

The S.P.G. Industrial School, Nazareth, Tinnevely district.—Being buried away in the extreme south of the Presidency far from the railway, this school is not so prominently before the public as other schools nearer Madras, but it is well worth a visit from those interested in industrial education. The manager, the Rev. P. Randle, is a man with ideas which he is not afraid to put into practice. He considers that an artizan will be a much better artizan if he gets a good general education and whilst most school managers are agreed that industrial schoolboys should have completed the primary school course, Mr. Randle aims at getting each boy through the lower secondary course before he completes his practical training. In this school eleven hours a week are devoted to instruction in literary subjects, which means a corresponding reduction of the time given to practical work, but the results achieved so far go to support Mr. Randle's thesis. The pupils take a keener interest in their work and have begun to realize that industrial education is something more than coolie work. The quality of the work done in this particular school has, in fact, improved rather than suffered by the change in the programme.

The lads who complete their course in this school seem prepared to go anywhere to secure employment in the trade they have learnt. Very recently three of them secured employment in the Perambur Railway Workshops, two have gone out as weaving masters, and three carpenters are about to proceed to Burma on a four years' engagement.

St. Francis Xavier's Industrial School, Tanjore.—This is another institution the development of which is retarded by the present financial stringency. Some years ago Government acquired about nine acres of land for the expansion of this school. While the Development Department have been unable to obtain funds for a grant-in-aid towards the erection of the long overdue industrial school buildings and the carpentry and weaving classes still assemble in dilapidated thatched sheds, the Education Department made a handsome contribution towards the erection of a secondary school building which has been finished and occupied for over a year and stands on part of the site originally acquired by this department for the industrial school.

The Danish Mission Industrial School, Tirucannamalai.—This was quietly closed during the year and a new school opened with the same manager and staff and practically the same pupils in well-built new premises on a more suitable site at Panruti. Government gave no grant towards the purchase of this new site or for the erection of the buildings. The necessary funds were collected by the manager, the Rev. Victor Theill, when on furlough in Denmark, and great credit is due to that gentleman for the efficient and very unostentatious manner in which he has brought about the transfer and reorganization of this school. With the new buildings now available and the room there is for expansion, this new venture should do very well under Mr. Theill's capable direction.

V-B

Proceedings of the Sub-Committee on Industrial Schools.

The meeting was held on Monday, the 23rd October 1922, at 11 a.m.

PRESENT.

Mr. C. W. E. Cotton, C.I.E., I.C.S., M.L.C. (Convener).
Sir P. Thiagaraya Chetti Garu, *kt.*, M.L.C.
The Rev. B. Rottschaeffer.
Mr. W. Fyfe.

The sub-committee decided to take the different points of reference enumerated in G.O. No. 528, paragraph 4, and to examine them seriatim as far as they concern industrial schools.

No. 1. Control of institutions for technical and industrial education.—It was agreed that industrial schools should remain under the Department of Industries. Separate sub-committees are dealing with the questions of technical and commercial education.

No. 3. Grades of classes, etc.—It was considered that full advantage should continue to be taken of missionary and charitable efforts to provide the greater part of industrial training and that the type of school represented by Tindivanam and Nazareth should be encouraged and developed. If the conditions laid down by the Industrial Commission were followed, industrial education in Madras would be limited to two or three centres only. The criteria postulated by that Commission were, however, to a large extent furnished by the majority of the aided industrial schools in this Presidency whatever form their evolution may have taken elsewhere and in certain schools as, for example, Katpadi, a workshop run strictly on commercial lines forms part of the institution. Government, in the sub-committee's opinion, supplement missionary and charitable effort by the establishment of a very limited number of model institutions on a small scale in areas where aided institutions are few and far between. It was thought that three such schools are badly needed on the West Coast, in the Ceded Districts and in the Northern Circars.

No. 4. Curricula.—It was considered by the sub-committee that the drawing up of curricula for the various aided and Government institutions should be left to the Department of Industries and the heads of institutions concerned.

No. 5. Qualifications for admission.—It was agreed that it is desirable to keep the standard of admission to industrial schools as high as possible but that managers of such schools should have discretion, subject to the approval of the inspecting officers of the department, to relax in special cases whatever rule may be drawn up for the particular school concerned and approved by the officers of the department. As a general rule, it was considered that a primary school pass should be regarded as the absolute minimum for admission into full-time industrial schools.

No. 6. Special institutions.—The sub-committee were strongly of opinion that the Madras Trades School which has already demonstrated its usefulness should be further developed as funds permit, and that the existing staff should at once be placed on a permanent footing. This type of school is not one which in the peculiar circumstances of industrial development in Madras can be started in many other centres in the Presidency, but when the new South Indian Railway Workshops are opened at Trichinopoly the opening of a trades school on the lines of that at Madras should be considered. It was further considered advisable to institute in Madras as a branch of the Madras Trades School a preparatory industrial school or a preparatory trades school to take pupils who had completed their primary or middle school course, as the case might be, and to give them a further three years' course of general education heavily biased towards industry with the idea of providing employers with a better qualified type of lad for recruitment, into works and mills as apprentices and learners. Apart from such "Preparatory Trades Schools," this committee is of opinion that the instruction provided in the ordinary schools for general education should not aim at providing a training in any particular trade or industry. The members of the committee recognize the value of manual training in wood, metal, cardboard or any other suitable medium as a means of training the hands, eyes and brains of the pupils in ordinary schools, but considered that beyond such manual training the ordinary schools for general education should not attempt industrial training.

No. 12. Sharing Expenditure.—The Committee regretted to find little evidence of any interest being taken in industrial education by local and municipal bodies but they are aware that the financial condition of most of them encourages little hope of improvement in this direction. As matters stand, the claim that all industrial schools recognized by Government should be exempt from local taxation of all kinds is a strong one, and is warmly endorsed by the sub-committee. The sub-committee further consider that the local bodies should be encouraged to grant industrial scholarships from local funds, such scholarships being tenable in Government or aided industrial schools in a particular locality or elsewhere, and believe that funds can be found, if the spirit is willing, at any rate to a limited extent. Where local bodies themselves conduct industrial schools, the committee considered that such schools should be treated by Government on exactly the same lines as other assisted schools.

No. 13.—The Sub-Committee considered that the management of factories and other industrial concerns could be expected to bear expenditure on industrial education only when such expenditure is in connexion with classes directly connected with their particular workshops or factories and where the curriculum of such classes is prepared with special consideration to the processes or particular work undertaken in the workshop or factory concerned.

No. 14. *Legislation*.—Beyond the question of “apprentices and apprenticeships” which is being considered by another sub-committee, this committee does not consider that any special legislative measures are necessary.

VI

Proceedings of the third general meeting held at the office of the Board of Revenue on Wednesday the 22nd November 1922.

PRESENT:

1. M. E. Couchman, Esq., I.C.S. (*President*).
2. W. Fyfe, Esq. (*Secretary*).
3. The Director of Industries.
4. M.R.Ry. R. T. Kesavalu Pillai Avargal, M.L.C.
5. “ M. K. Dandekar Avargal (Co-opted.).
6. “ S. Arpudaswami Udayar Avargal, M.L.C.
7. Dr. P. Subbarayan, M.L.C.
8. Khan Bahadur Muhammad Sadulla Badsha Sahib Bahadur, M.L.C.
9. M.R.Ry. A. Subbarayudu Nayudu Garu, M.L.C.
10. M.R.Ry. Y. Ranganayakulu Nayudu Garu.
11. “ C. Ramalinga Reddi Garu, M.L.C.
12. Sir P. Tyagaraya Chetti Garu, M.L.C.
13. Miss B. M. Tweddle
14. Mrs. Radhabai Subbarayan } (Co-opted.).
15. “ Devadoss }
16. M.R.Ry. Diwan Bahadur M. Krishnan Nayar Avargal, M.L.C.
17. The Rev. B. Rottschæffer.
18. The Principal, Engineering College.
19. The Rev. Victor Thiell (Co-opted.).

The reports of the sub-committees on “Women’s Work” and “Industrial Schools” were taken up for discussion.

1. *Women’s Work*.—The recommendation of the sub-committee that any organization for the provision of Technical and Industrial Education for women and girls should be under the control of the Department of Industries was concurred in. The various subjects recommended by the sub-committee as suitable for women and girls were accepted and it was considered that special preference should be given to cottage industries. It was agreed that for the provision of instruction in those subjects the existing school-cum-factory type of institution is most suitable. The recommendations of the sub-committee that such institutions should act as central depots for the training of recruits and that in large centres like Madras, sub-agencies or subordinate depots should be instituted were accepted by the meeting. It was also considered that the work of selling the products must be entrusted to one central body to prevent the cutting down of prices by competition among various institutions and that for the above purpose the Victoria Technical Institute, Madras, might well be developed with assistance from Government.

2. The sub-committee’s recommendations with regard to curricula and the minimum educational qualifications for admission into the above institutions were accepted by the meeting without modification.

3. It was agreed that the subjects recommended by the sub-committee are suitable for inclusion in the curricula of elementary and secondary girls schools under the Department of Public Instruction.

4. The suggestion of the sub-committee that, wherever possible, the pupil-teacher system should be adopted was referred to the sub-committee on “Training of Teachers”.

5. The meeting approved the recommendations of the sub-committee that representations should be made to relieve lace workers of the heavy import tax which is now being levied on linen thread, the amount of customs revenue likely to be lost being inconsiderable, and there being several precedents for such discrimination in respect of articles which India does not produce and which are the raw material from which articles on the export list are manufactured. Mr. C. Ramalinga Reddi dissented from this view on the ground that it was a matter of imperial policy which has to be viewed from other points of view also.

6. *Industrial Schools*.—The sub-committee’s recommendation that industrial schools should remain under the Department of Industries was accepted.

7. *Grades of classes*.—At present the greater part of the industrial education is provided by missionary and other charitable institutions and Government should encourage the further development of such efforts. But it was felt that Government in addition to aided schools ought, as funds permit, also to institute a number of model institutions in areas where aided institutions are few and far between, and as an earnest of this policy that three such schools should be provided in the Ceded Districts, the Northern Circars and the West Coast where they are badly needed.

8. It was agreed that the drawing up of curricula for Government and aided institutions should be left to the Department of Industries and heads of the institutions concerned.

9. *Qualifications for admission*.—While accepting the recommendations of the sub-committee that the standard of admission to industrial schools should be kept as high as possible and that the managers should have discretion, subject to the approval of the inspecting officers of the department, to relax the rules in special cases, the meeting decided that, as a general rule, a lower elementary school pass should be regarded as the absolute minimum for admission into full time industrial schools.

10. *Special institutions*.—The sub-committee were strongly of opinion that the Madras Trades School which has already demonstrated its usefulness should be further developed as funds permit, and that the existing staff should at once be placed on a permanent footing. This type of school is not one which in the peculiar circumstances of industrial development in Madras can be started in many other centres in the Madras Presidency, but when the new South Indian Railway workshops are opened at Trichinopoly the opening of a Trades School on the lines of that at Madras should be considered. It was further considered advisable to institute in Madras as a branch of the Madras Trades School, a preparatory trades school, to take pupils who had completed their primary or middle school course, as the case might be and to give them a further two or three years’ course of general education heavily biassed towards industry, with the idea of providing employers with a better qualified type of lad for recruitment into works and mills as apprentices and learners.

11. With regard to the question of introducing industrial subjects into ordinary schools, there was a long discussion, one section of the meeting holding that such instruction should be compulsory in all ordinary schools, another that it should be optional and a third endorsing without qualification the views of the sub-committee. Eventually the proposition of Mr. A. Arpudaswami Udayar that the committee recognize the value of manual training and also are of opinion that vocational and industrial training may, with advantage, be included in the curriculum of ordinary schools as *optional subjects* was put to vote and carried by a majority of 8 against 5, the ladies and Muhammad Sadulla Badsha Sahib having left the meeting.

12. The recommendations regarding items 12, 13 and 14 were accepted without modification.

13. The meeting agreed to appoint the following sub-committee to deal with item 11 of paragraph 3 of G.O. No. 528, Finance, dated the 8th April 1922:—

- | | | | | |
|---|-----|-----|-----|------------|
| (1) W. Fyfe, Esq. (Convener) | ... | ... | ... | } Members. |
| (2) M.R.Ry. C. Ramalinga Reddi Garu, M.L.C. | ... | ... | ... | |
| (3) M.R.Ry. M. K. Dandekar Avargal (Co-opted) | ... | ... | ... | |
| (4) Dr. P. Subbarayan, M.L.C. | ... | ... | ... | |
| (5) Khan Bahadur Muhammad Sadulla Badsha Sahib Bahadur, | ... | ... | ... | |
| M.L.C. | | | | |

Since postponed to 3rd December 1922.

The sub-committee will meet on the 30th November 1922 at 11 a.m. at the office of the Director of Industries.

14. It was agreed that the next general meeting of the committee should be held on the 16th December 1922 at 2-50 p.m. at the office of the Board of Revenue, Chepauk, Madras, to consider—

- (1) the report of the sub-committee on the 'Training of Teachers',
- (2) the report of the sub-committee referred to in paragraph 13 above,

VII

Proceedings of Sub-Committee on the Training of Teachers.

PRESENT:

R. G. Grieve, Esq. (Convener).

W. Fyfe, Esq.

The Principal, College of Engineering, Madras.

Training of teachers in commercial education.—The Committee have recommended the opening of two additional schools of Commerce, one in the south and one in the north of the Presidency. At these two schools as well as in Calicut and at the Government Institute of Commerce, Madras, teachers could be trained somewhat on the lines of the training now given at Calicut. The facilities at Calicut will be insufficient if Government accept the recommendation made to start continuation classes and expand this branch of education. It may be necessary for those controlling these schools to accept provisionally, teachers whose professional and general educational qualifications may be inadequate. In the case of such teachers and in the case of those who are not up-to-date a 'refresher' course would be desirable at some or at one of the four schools mentioned above.

Training of teachers in technical and industrial subjects.—The regulations governing the issue of certificates for technical and industrial teachers are considered to be unsatisfactory in that they lay down no general educational qualifications as a condition precedent to the grant of a certificate and do not connote any actual practical training. The Sub-Committee consider that, so far as is possible, arrangements should be made for the training of such teachers prior to the issue of a certificate, in schools recognized by the Director of Public Instruction or the Director of Industries as fit to receive such teachers. Those admitted will be regarded as pupil-teachers and the length and nature of the course given to them would be settled by the head of the department in each case. It might be desirable to give candidates in such schools some stipend for the period of their training and the schools a capitation grant. The starting of separate training schools for teachers of this kind, while desirable, is not recommended for financial reasons. These suggestions may involve the cutting out of the examinations for teachers' certificates which are referred to in Rules 158 to 162 of the Madras Educational Rules but the Sub-Committee see no great objection to the disappearance of these examinations, though they recognize that it will not be possible to discontinue them immediately. If the recommendation regarding pupil-teachers was accepted, the Government Technical Teachers' Certificate Examination would ultimately be superseded by a system of certificates granted to these students on the combined result of their pupil-teachers' course and of eighteen months or two years' approved service subsequent to leaving the school.

VII-A.

Proceedings of Sub-Committee on expenditure.

The Sub-Committee appointed at the third general meeting to deal with item 11 of paragraph 4 of the Government Order appointing the General Committee, that is,

to prepare an estimate of the expenditure involved by the recommendations of the Sub-Committees as accepted by the General Committee, met at the Office of the Director of Industries on Sunday the 3rd instant at 11 a.m.

PRESENT:

W. Fyfe, Esq. (Convener).

M.R.Ry. M. K. Dandekar Avargal.

" C. Ramalinga Reddi Garu, M.L.O.

Khan Bahadur Muhammad Sadulla Badsha

Sahib Bahadur, M.L.O.

} Members.

The Sub-Committee first considered the expenditure involved in the proposals with regard to 'Commercial education.'

Mr. Dandekar submitted certain figures and after discussion it was agreed to recommend that expenditure be incurred as follows:—

On raising the present College of Commerce, Madras, to University grade, capital expenditure Rs. 1,50,000 and a recurring expenditure of Rs. 60,000 against which there is expected to be a set off of about Rs. 30,000 received as fees, bringing the net expenditure per annum down to Rs. 30,000.

On raising the School of Commerce at Calicut to the intermediate grade, the Committee recommends an expenditure of Rs. 5,000 for non-recurring expenditure spread over about three years, principally devoted to bringing the library up-to-date, and a recurring expenditure of about Rs. 25,000 per annum, this being Rs. 10,000 in excess of the present annual expenditure. In this connexion the Sub-Committee considers that it might be possible to organize this institution to run in conjunction with the Zamorin's College, Calicut, in which case the recurring expenditure could, the Sub-Committee believe, be reduced to Rs. 20,000 per annum. For the two new schools of commerce, one in the north and one in the south of the Presidency, the Sub-Committee consider that it will be necessary to spend Rs. 50,000 on each for non-recurring expenditure and Rs. 12,500 per annum for recurring expenditure; but recommend that these two institutions should be started in rented buildings, in the first instance, and expenditure on buildings incurred only after the schools appear to have justified their continuance.

For grant-in-aid to the continuation classes in commercial subjects which have been recommended, the Sub-Committee consider that it will be necessary to provide, for teaching grant Rs. 10,000 increasing by Rs. 1,000 annually up to a maximum of Rs. 20,000 and for equipment (half-grants) Rs. 10,000 the first year to be followed by Rs. 2,000 per annum for the next ten years.

Technical education.—With regard to technical education, which it has been agreed should remain under the departments now concerned, this sub-committee does not feel competent to frame a definite budget as no definite proposals have been accepted for the provision of fresh facilities for technical education in this Presidency. The sub-committee feel, however, that, it having been accepted at the last general meeting, that the College of Engineering, Madras, should be developed into a Technological Institute, it is desirable to consult the Principal of this College with regard to detailed proposals particularly with regard to the amount by which the present budget will require to be augmented if this proposal is carried out.

Research.—It has been accepted by the General Committee that existing laboratories in this Presidency, for example, those of the College of Engineering, Guindy, the College of Agriculture, Coimbatore, and the Presidency College, Madras, might be used for research work. These suggestions, if carried out, will necessitate some augmentation of the budget of these colleges. The sub-committee do not feel competent, however, to frame detailed budgets and suggest that the General Committee merely suggest in their report that Government call for proposals from the heads of departments concerned. It has further been accepted by the General Committee that the Indian Institute of Science might, under suitable arrangements, be used for chemical research work as applied to industries. The sub-committee are agreed that

Mr. Cotton's suggestion that Rs. 50,000 per annum be provided by the Madras Government towards the maintenance of the Indian Institute of Science in order to provide facilities for the Chemical Research on behalf of the Madras Government be agreed to. The sub-committee is further of opinion that research work should as far as possible be undertaken within the Presidency with the idea of fostering the spirit of research and developing the facilities of our existing institutions. The sub-committee consider that facilities outside the Presidency should be utilized only when local facilities are found insufficient.

Scholarships.—The attached statement shows the amount now expended through the Department of Industries on Technical and Industrial scholarships and the amount which it will be necessary to provide if the recommendations of the sub-committee as accepted at the last general meeting are to be carried out.

With regard to the recommendations of the sub-committees on women's work, 'Industrial schools' and 'Weaving schools,' this sub-committee considers that, for all practical purposes, the aided institutions concerned may be budgetted for under the head 'Grant-in-aid to Industrial schools'. The sub-committee are agreed that the budget under this head for the current year has been cut down to below starvation limit, and that a considerably increased budget will be necessary if all the aided schools contemplated are to be started and developed. There are at present 40 aided schools under the control of the Department of Industries whilst the budget allotment for grant-in-aid for the current year is only Rs. 60,000. As two schools, The Chengalvoraya Nayakar's Technical Institute and the Madras Anjuman Industrial School, between them, absorb Rs. 14,000 there is comparatively little left for distribution amongst the other 38 schools. After discussion the sub-committee are agreed that if the aided schools are to be continued and developed, it will be necessary to budget for something approaching the following figures:—

Grant-in-aid to Industrial schools.

	Per annum.
Teaching (one lakh increasing by)	Rs. 15,000
Building (half grants)	50,000
* Building (special)	20,000
Equipment (half grant)	40,000
* Equipment (special)	10,000

* Two-thirds or full grant in special cases.

Government institutions.—The Government institutions with which we are, at present, concerned are the Leather Trades School, School of Arts, Madura Industrial Institute, The Textile Institute, The Madras Trades School and the new Government Industrial schools which, it is proposed, should be started in different parts of the Presidency.

With regard to the Leather Trades School, recurring expenditure for 1921-22 was slightly under Rs. 69,000 but these figures include a considerable amount spent on equipment. A scheme is at present before Government to provide extra accommodation for this institute. The new buildings included in that scheme will, it is hoped, contain laboratories for the use of the Industrial Chemist at headquarters. The buildings and equipment are estimated to cost about Rs. 1,53,000. Recurring expenditure for the next ten years may reasonably be expected to amount to something under Rs. 85,000 per annum. The sub-committee understand that a separate committee has been appointed by Government to consider the future of this institution and it is suggested that it would be advisable to wait the report of that committee before embodying these figures in the final report of this committee.

The School of Arts.—The School of Arts, during 1921-22, cost a little over Rs. 82,000. An average budget of one lakh of rupees may, the sub-committee consider, be provided for this institution for the next ten years for recurring expenditure.

Madura Industrial Institute.—The expenditure on the Madura Industrial Institute since the 1st of January 1921, when the re-organized institute commenced regular work, is as follows:—

	Rs.	A.	P.
From the 1st January to 31st March 1921	23,831	15	0
For the year 1921 to 1922 just under	70,000	0	0

The scheme for this institution sanctioned in G.O. No. 1390, dated the 29th July 1920, is not yet in full working order and the figures given above are therefore of very little value in framing our estimate of expenditure for the next ten years, but the committee consider that an average expenditure of about one lakh of rupees per annum may be provided for this institution for the next ten years whilst they further consider that Rs. 30,000 per annum can very well be spent on equipment each year for the next three years. Against these figures there will be set off of the amount received for sales and work done. For 1921-22, when the institute was not at full strength the receipts were Rs. 24,804-4-7 and this figure may be expected to increase considerably when the institute is at full strength.

Textile Institute.—The Textile Institute is, at present, simply a small experiment in a rented building costing about Rs. 20,000 per annum. A scheme prepared by Mr. Amalsad for a permanent institute contemplates a new building costing about two lakhs with equipment costing about one lakh and a recurring cost of Rs. 50,000 per annum. There was considerable discussion regarding these figures but as it is understood that the scheme has been carefully worked out by Mr. Amalsad in consultation with the Industrial Engineer, the sub-committee agreed for the present to accept these figures, but consider that Mr. Amalsad should be present at the next general meeting to answer any questions regarding them which the members of the General Committee may wish to raise.

Madras Trades School.—The Madras Trades School is also conducted in a rented building and costs something under Rs. 50,000 per annum. The new buildings at present being erected are expected to cost about four lakhs of rupees whilst the equipment will cost about two lakhs of rupees in all. When the new buildings are finished the recurring cost will amount to, for the Trades School classes about Rs. 85,000 per annum, and for the preparatory Trades School attached about Rs. 15,000 per annum or in round figures about one lakh of rupees per annum for recurring expenditure for the next ten years. The sub-committee consider that these figures may be accepted.

For new Government institutions, the committee consider that it will be sufficient to allow for non-recurring expenditure on lands, buildings and equipment Rs. 1,40,000 per annum for the next ten years and for recurring costs Rs. 50,000 per annum to be increased by Rs. 50,000 every second year, that is to say, the committee contemplate the establishment of one school every second year, the non-recurring cost amounting to Rs. 2,80,000 for each school, and the recurring cost Rs. 50,000 per annum for each school. The sub-committee consider, however, that every effort should be made to find suitable buildings already available. If suitable buildings can be found available the sub-committee consider that the programme should be accelerated and savings on buildings utilized to start the schools more quickly than one every two years.

With regard to certain proposals for the inclusion of "women's work" in ordinary girls' schools the sub-committee do not feel competent to frame the necessary budget and consider that it will be sufficient to recommend to Government that the heads of departments concerned be asked to formulate definite proposals. Similarly with regard to central depot at Madras referred to in paragraph 3 of the report of the sub-committee on "women's work" this sub-committee find it difficult to frame definite proposals. The sub-committee understand that proposals for the re-organization of the work of the ladies' committee of the Victoria Technical Institute are, at present, under correspondence with the Director of Industries. Until these proposals have been worked out it will be difficult to frame a budget and this sub-committee consider that the framing of that budget may very well be left in the hands of the Director of Industries.

Control.—This sub-committee have not discussed the question of control of industrial education or expenditure which may have to be incurred in strengthening

the staff of the Director of Industries if all the recommendations of the committee are accepted. The sub-committee feel that this is a matter which might better be discussed in greater detail by the general committee, before the draft report is prepared. At present, the control of aided industrial schools and Government industrial schools is vested in the Director of Industries assisted by a full-time inspector of industrial schools. If all the recommendations are to be carried out, it may be necessary to strengthen the present staff. It has been suggested, for example, that a lady assistant might be appointed to work under the orders of the inspector of industrial schools to relieve him of the inspection work connected with girls' industrial schools to act perhaps as Secretary to the Women's Work Committee of the Victoria Technical Institute and generally to control and develop cottage industries for women in this Presidency.

As at present.	RS.	As proposed.	RS.
1. Eight State Technical Scholarships at £240 each (240×8×15).	28,800	1. Ten State Technical Scholarships at £240 each (240×10×15).	36,000
2. Fifteen scholarships in all tenable at any one time at the Indian Institute of Science, Bangalore (15×60×12).	10,800	2. No change	10,800
3. Twenty-four scholarships in all tenable at any one time at the Victoria Jubilee Technical Institute, Bombay (four years course; 24 scholarships per annum).	17,280	3. Twenty scholarships tenable at any one time at the Victoria Jubilee Technical Institute, Bombay.	14,400
4. Industrial School Scholarships (total 300, value ranging from 1-8-0 to 7-8-0 per mensem).	13,680	4. No change	13,680
		5. Six scholarships tenable at the Serampore Weaving Institute (three years' course; 2 scholarships per year).	4,320
		6. Two scholarships tenable at the Engineering College, Sibpur (full course two years; 1 scholarship every year).	1,440
		7. Four scholarships tenable at the Sir J. J. School of Arts, Bombay (four years' course; 1 scholarship per annum).	2,880
		8. Lump provision for scholarships to be awarded by the Director of Industries.	3,000
Total ..	70,560	Total ..	86,520

VIII

Proceedings of the Fourth General Meeting held at the Office of the Board of Revenue on Saturday the 16th December 1922.

PRESENT:

M. E. Couchman, Esq., I.C.S. (President).
 W. Fyfe, Esq. (Secretary).
 The Director of Public Instruction.
 The Director of Industries.
 The Rev. B. Rottschaeffer.
 Dr. P. Subbarayan, M.L.C.
 M.R.Ry. A. Subbarayulu Nayudu Garu, M.L.C.
 " Y. Ranganayakulu Nayudu Garu.
 The Principal, Engineering College, Madras.
 N. A. Walker, Esq.
 M.R.Ry. L. K. Tulsiram Avargal.
 Sir P. Tyagaraya Chetti Garu, M.L.C.
 The Rev. Victor Theill (co-opted).
 D. M. Amalsad, Esq. (co-opted).
 M.R.Ry. R. T. Kesavulu Pillai Avargal, M.L.C.
 Khan Bahadur Muhammad Sadulla Badsha Sahib Bahadur, M.L.C.
 M.R.Ry. A. Arpudaswami Udayar Avargal, M.L.C.

The committee first considered the report of the sub-committee on 'expenditure' copies of which had been circulated to the members. The committee accepted the recommendations of the sub-committee except with regard to the figures for 'commercial education'. These particular figures were accepted provisionally only, Mr. R. G. Grieve, Acting Director of Public Instruction, expressing the opinion that they would have to be examined in detail before he could regard them as anything more than approximate; in particular, he suggested that, under examination, the figures given for non-recurring expenditure might have to be increased whilst the figures for recurring expenditure appeared at first glance to be unduly high. The committee agreed with Mr. Grieve's views.

2. The committee then considered the report of the sub-committee on the training of teachers for commercial, industrial and technical subjects. Copies of this report also had been circulated to the members. The committee accepted the recommendations of the sub-committee in toto.

3. The committee next considered Letter No. dg. 1435, dated the 14th October 1922, from Messrs. Tata Sons, Limited, Agents, The Tata Iron and Steel Company, Limited, Navsari Buildings, Fort, Bombay, to the Secretary to the Government of Madras, Education Department, Madras, on the question of providing, from Madras Provincial funds, scholarships tenable in the Technical Institute at the Steel works at Jamshedpur. Mr. Cotton, before leaving Madras, wrote a note on this subject in which he stated, for reasons given, that he was not in favour of any contribution being made to the Jamshedpur Technical Institute. Copies of this note had been furnished to the members. In support of the views expressed by Mr. Cotton, the Secretary pointed out that the three years' course at Jamshedpur would cost considerably more than the Government technical scholarships at present awarded to students proceeding to England. The members present unanimously agreed that it is undesirable that Madras Provincial funds should be expended on the institution of scholarships at Jamshedpur Technical Institute.

4. The committee next appointed the following sub-committee to draft the report:—

- (1) The Director of Industries (Convener).
 (2) Dr. P. Subbarayan, M.L.C.
 (3) M.R.Ry. C. Ramalinga Reddi Garu, M.L.C.
 (4) W. Fyfe, Esq. } Members.

5. It was agreed to hold the next meeting of the general committee on Saturday the 27th January at the office of the Board of Revenue, Chepauk, Madras, at 2-30 p.m. and that the sub-committee appointed to draft the report should hold their first meeting on the 4th January 1923 at 11 a.m.

IX

Proceedings of the Fifth General Meeting held at the Office of the Board of Revenue on Saturday the 27th January 1923.

PRESENT:

M. E. Couchman, Esq., I.C.S. (President).
 The Director of Industries.
 The Director of Public Instruction.
 The Principal Engineering College, Madras.
 The Rev. B. Rottschaeffer.
 Sir P. Tyagaraya Chetti Garu, M.L.C.
 Dr. P. Subbarayan, M.L.C.
 The Rev. Victor Theill.
 M.R.Ry. C. Ramalinga Reddi Garu, M.L.C.
 " Y. Ranganayakulu Nayudu Garu.
 " A. Subbarayalu Nayudu Garu, M.L.C.
 " L. K. Tulsiram Avargal.
 W. Fyfe, Esq.
 Khan Bahadur Muhammad Sadulla Badsha Sahib Bahadur, M.L.C.

Printed copies of the draft report, as passed by the sub-committee, having been circulated to the members with printed notes and proceedings of the various meetings of the committee and sub-committees, the committee proceed to consider the draft report.

2. After some discussion, the report was passed subject to a very few minor alterations. The members then signed the report, Mr. Tulsiram signing subject to a minute of dissent which he promised to forward to the Secretary within ten days. The President intimated that all minutes of dissent should be submitted within ten days so that the report might be printed and submitted to Government without delay.

Secretary's note.

Mr. Tulsiram did not submit his minute of dissent. He was reminded by telegram and by letter, and as no communication of any kind was received from him up to Monday 19th February, 23 days after the meeting, the report was sent to the Government Press without his minute.

