

Government of Madras
HOME (EDUCATION) DEPARTMENT

G.O. No. 1107, 30th August 1917

Technical education

Recording letter from the Government of India containing orders on the recommendations made by Lieutenant-Colonel Atkinson and Mr. Dawson on the relations of technical institutions and employers of labour in India.



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K. P.

ORIGINAL

Government of Madras

HOME (EDUCATION) DEPARTMENT

G.O. No. 1107, 30th August 1917

Technical education

Recording letter from the Government of India containing orders on the recommendations made by Lieutenant-Colonel Atkinson and Mr. Dawson on the relations of technical institutions and employers of labour in India.

● READ—the following paper:—

Letter—from the Hon'ble Sir E. D. MACLAGAN, K.C.I.R., C.S.I., Secretary to the Government of India, Department of Education (Education).

To—the Secretary to the Government of Madras, Home (Education) Department.

Dated—Simla, the 23rd March 1917.

No.—274

I am directed to invite a reference to this Department's Circular No. 2225—2235, dated the 27th September 1912, forwarding, for opinion, a report by Lieutenant-Colonel Atkinson, R.E., and Mr. Dawson, on the relations of technical institutions and employers of labour in India and to enclose, for information, a copy of the replies received from the Local Governments and the Railway Board. It will be recollected that in the year 1912 the Government of India appointed a Committee composed of Lieutenant-Colonel E. H. deV. Atkinson, R.E., Principal of the Thomason College at Roorkee, and Tom. S. Dawson, Esq., J.P., Principal of the Victoria Technical Institute, Bombay, with a view to furthering the employment of Indians trained at engineering colleges and technical institutions in this country and to establish closer relations between the latter and the employers of labour. The report was submitted at the end of May 1912 and was forwarded in September of the same year to Local Governments for consideration. The opinions of the Local Governments having been received, the Government of India now desire to add a few comments on the results attained.

2. In enquiring into the relations of existing technical institutions with employers of labour the Committee had necessarily to pronounce on the principles upon which these institutions are conducted, but their report does not on that account cover the entire field of technical education and in dealing with the question before them they confined their recommendations primarily to the case of the engineering trades (civil, mechanical and electrical) and of the textile industries, dealing incidentally only with certain questions relating to mining engineering and industrial chemistry and with the education of the children of artisans. They had by their numerous interviews with employers and in other ways done much before actually writing the report to bring about the increased employment of Indians which was the main object of their appointment and the circulation of the report has already led Local Governments to take or to contemplate action in several directions indicated by the writers. It remains, therefore, for the Government of India to draw attention to the chief principles advocated in this report and to indicate briefly their own attitude towards its main recommendations.

3. The key-note of the report may be said to be represented by the proposition

Main thesis that more practical training that education in technical theory, though ordinarily a necessary qualification, cannot in itself lead to employment and that it must be supplemented by a far greater amount of practical manual work than has hitherto been considered requisite. The writers, therefore, have laid the greatest stress on the practical element in technical preparation. They have found the general result of their careful and far-reaching enquiries to be very favourable and report that a large number of openings exist for the employment of technically trained Indians. But they insist that the training, if it is to lead to employment, must include a large proportion of practical manual work. In this view they are supported by the Local Governments and the Government of India have no hesitation in endorsing it as correct.

4. The Committee have discussed the various methods by which the theoretical and the practical training can be combined, whether by concurrent teaching or by alternate courses or by one method followed by the other, and they hold that the system most generally suitable is that of a theoretical followed by a practical course. There are cases in which local conditions may support the alternate or 'sandwich' system, and this system has been tried in the preparation for certain professions in Burma; but the Local Governments generally have supported the view advocated by the Committee; and the Government of India, while unwilling to preclude experiment in other systems when they appear to promise success, are ready to accept the Committee's conclusion as generally applicable in the existing circumstances of India to all but the lower class of artisans. It is of course presumed that in any case the theoretical training shall be given by practical teachers and on lines capable of practical application. In expressing the foregoing general conclusion the Government of India desire, however, to make one reservation. They are inclined to the view that for the improver classes the institution, where possible, of night schools would prove of considerable benefit not only as giving to the workers a chance of improving their theoretical knowledge but also as supplying them with an incentive to induce their children to obtain the necessary theoretical knowledge. The instruction in such schools, which need not necessarily be composed of regular classes or prepare for periodical examinations, might in many cases be of an informal character more in the form of demonstrations or lectures which anybody might attend.

5. The Committee recommend that the theoretical part of instruction should, in the case of civil engineering, be carried out as at present in large colleges where engineering education of every grade may be imparted, and they base this recommendation on the ground that the lower classes are thus able to obtain at a low cost the supervision of a high grade competent staff. There are, on the other hand, obvious objections which have been pointed out by the Government of the United Provinces to the training of all classes at one institution, and it has in several other professions been found advantageous to teach the higher and the lower grades of students in different institutions, but as the present system has the advantage of immediate economy and as it will probably come before long under separate examination by the Government of India, it is sufficient to say that the existing system must for the present be maintained pending the results of any further enquiry that may be made in connection with engineering education generally.

6. It is the almost universal opinion of employers consulted that there is little or no scope for high grade mechanical and electrical engineers whose education has been mostly of a theoretical character, and that for these professions and for the textile industry practical experience in addition to theoretical training is necessary. The main demand at present is for the 'improver' class, that is to say, the class which looks primarily to a life of manual labour rather than to one of organization. It is for this class mainly, as representing the average man, that instruction in this country has hitherto been provided, but the claims of men desirous of receiving advanced theoretical instruction cannot be overlooked in the future, and it is hoped that this aspect of the case will come under examination by the Committee recently appointed for the reorganization of the Public Works Department, who will, no doubt, recognize that theoretical training for this class also must be supplemented by opportunities for practical work. In regard to this class, Colonel Atkinson's Committee recommend well-equipped institutions under proper control for certain provinces only, though, owing to the long distances in India, they see no objection to a reasonable multiplication of similar institutes provided this can be established on a good financial basis. In these views the Committee have received general support, but in proceeding, as they do, to suggest that the smaller institutes should be placed under the control of one central institute in each province, they are on more disputable ground, and the Government of India agree with the bulk of the Local Governments in holding that any such arrangement would be at any rate premature and that for the present the smaller like the larger institutions should be under the direct supervision of Government exercised either by a central board or by some individual officer.

7. The practical training which is to follow the theoretical instruction should, in the opinion of the Committee, be carried out by a system of apprenticeship either in Government or in private institutions. It is clear that, if arrangement can be made for apprenticeships, private employers and local bodies will prefer to engage men who have had practical training rather than those who have not. In the case of civil engineering the Government is ordinarily the only authority in a position to take apprentices who apply for practical training, and the Government of India are glad to find that the Railway authorities have arranged to give the system a trial and that of the Local Governments some have already to some extent introduced the system, while others are prepared, when financial circumstances permit, to provide stipends for apprentices who are looking for employment under local bodies or private firms. A system of this kind will entail expense and will impose additional burdens on the departments of Public Works, but the Government of India agree with the Committee that these inconveniences are outweighed by the benefit accruing to the country generally. It will be for Local Governments to decide the term for which apprenticeship should last and the grades to which the system should be extended; and if there are private firms which are ready to take in apprentices, their participation will serve to lighten the burden imposed upon the Government.

8. In the case of electrical and mechanical engineering and in the textile industry there is less difficulty in ensuring that a student should not receive a diploma or other recognition on the completion of his course on the basis of purely theoretical education as the engineering schools and other institutes, where the 'improver' classes are trained, are for the most part under Government control. On the other hand, the practical training of this class in the professions indicated, unlike that of civil engineers, must as a rule be provided by private rather than by official employers, and it is not always possible to find firms who are prepared to take in apprentices. In Bombay, for instance, where the enquiries of the Committee led to expectations of a general response, the subsequent efforts of the Victoria Jubilee Technical Institute to obtain promises from employers to take in apprentices on a living wage for two years have proved disappointing; but the Government of India feel assured that, as time goes on, means will be found by the employers in their own interests and in those of the community to assist in the matter, and in the meantime use should be made of the powers which Government can ordinarily exercise of providing that a marked distinction should be made between the certificate available for a purely theoretical education and that provided for a complete education both in theory and practice. If cases should occur in which difficulty is experienced in receiving assistance from firms which receive substantial contracts from Government, the Local Governments will be at liberty to acquaint the Government of India with the circumstances. And in places where it is found impossible to secure apprenticeship for students it will be necessary to meet the object in view so far as possible by utilizing really good workshops in existing institutes or by creating practical demonstration workshops under Government supervision. Where workshops are provided in the institution itself it will be less necessary to adhere strictly to the principle under which the theoretical training should precede the practical. It is probable that some of these questions will also be considered by the Public Works Reorganization Committee.

9. In order to ensure permanent co-ordination of the relations between technical institutions and employers of labour, the Committee recommend the appointment of a controlling officer and the establishment of an employment bureau for the whole of India. They urge that facilities vary in different provinces and that, if arrangements are of a provincial character, they will lead to the exclusion of suitable men in provinces where special facilities do not prevail. The Local Governments, however, while generally in favour of appointing some authority for guiding students to employment, are of opinion that a provincial authority would be more in touch with local firms and students, would be better acquainted with local needs and would, as experience has shown, be able to utilize adequately the resources available outside the particular province concerned. In this view the Government of India concur and they leave it to Local Governments to arrange for such provincial centre or centres for

dealing with the question of employment as they consider suitable. They merely suggest that, where such a course seems indicated, direct correspondence should be freely resorted to between the authorities in such administrative area.

10. The Committee go on to make certain suggestions regarding the education and employment of skilled workmen, and in dealing with this class their scheme is to provide the children of workmen with simple vernacular education including elementary arithmetic and drawing to be followed between the ages of 12 and 14 by apprenticeship in workshops accompanied by after-noon classes of a literary and also of a vocational character. Similarly, after-noon classes of a practical nature are recommended for textile jobbers and mistries in suitable centres. The Committee have at the same time condemned the system of industrial schools now ordinarily prevailing and they have done this mainly on the ground that such schools have hitherto failed to provide employment and that the smaller and easier nature of the manual work in such schools unfits the pupil for the hard manual labour which he must undergo in a workshop under commercial conditions. This condemnation of industrial schools does not meet with the complete concurrence of Local Governments, and the Government of India are not themselves entirely convinced that it is applicable to present circumstances in India. At the same time, they would be glad to see further experiments made, when possible, in the direction indicated by the Committee. The question of factory schools has long occupied the attention of the Government of India and is one to which they attach the greatest importance. Proposals have been made for legislation in order to induce employers to provide instruction for children connected with factories, and these proposals have been under the consideration of the Government of India. Dealing for the present with the character of the schools required, they recognize that these schools must for the most part confine themselves to the teaching of the three R's and drawing and that the children for whom they are intended are often already employed. When it is proposed to give manual and vocational training, this training, in order to be efficient, must ordinarily be given through a system of apprenticeship. But, while the apprenticeship system should be pushed as far as possible, having regard to the views of the employers and to the expense entailed, there is no reason why in certain places central vocational classes outside the system of apprenticeship should not be started in addition to existing industrial schools for the children of artisans and also possibly for the theoretical instruction of promising mechanics.

11. The Committee have also dealt with certain further points such as the grant of State technical scholarships for training in Europe and elsewhere, the training of permanent-way inspectors, the institution of mining schools and certain other points connected with their main recommendations. These are either under separate consideration by the Government of India or are matters on which the Local Governments are themselves at liberty to decide, and no further remarks are called for regarding these points in dealing with the Committee's report. The report, as above noted, has already effected improvement in the relations between the technical institutions and the employers of labour, and it has been serviceable in preventing undesirable progress along infructuous paths. Its main recommendations as interpreted in this circular represent, in the opinion of the Government of India, the best system available for placing Indian talent in the way to obtain industrial employment and they trust that, in acting on the spirit of these recommendations, Local Governments will receive the full support of local authorities and industrial firms who are in a position to give assistance.

Order—No. 1107, Home (Education), dated 30th August 1917.

Recorded.

(True Extract)

R. RAMACHANDRA RAO,
Secretary to Government.

To the Director of Public Instruction.
" Officer in charge of the Department of Industries.
" Public Works Department.

NOTES CONNECTED WITH G.O. No. 1107, HOME (EDUCATION),
DATED 30TH AUGUST 1917.

[SUBJECT.—*Resolution of the Government of India on the recommendations made by Lieutenant-Colonel Atkinson and Mr. Dawson to bring technical institutions into closer touch and more practical relations with employers of labour in India.*]

From the Government of India, dated 23rd March 1917, No. 274.

Paragraph 48 of the report of Lieutenant-Colonel Atkinson and Mr. Dawson contains their general recommendations to bring technical institutions into closer touch and labour in India and chapter XV of the report contains certain special recommendations on subjects connected with the object of their enquiries. The remarks of this Government on these recommendations were communicated to the Government of India in Letter No. 799, Educational, dated the 26th August 1913. The recommendations themselves will be found fully examined in the notes to the Government Order. Attention is particularly solicited to His Excellency's note on page 19 of notes. The Government of India have now passed orders on the recommendations of Lieutenant-Colonel Atkinson and Mr. Dawson. These orders are with a view "to draw attention to the chief principles advocated in this report" (of the two gentlemen) "and to indicate briefly their (the Government of India's) own attitude towards its main recommendations". No immediate action seems therefore necessary at present on any of the recommendations. Such of the points on which the Government of India consider that the local Governments may take specific action are noticed below.

2. *Practical training in Civil Engineering.*—In paragraph 7 of their resolution the Government of India leave it to Local Governments to decide the term of apprenticeship required for the practical training of students in civil engineering colleges and the grades to which the system should be extended. It is submitted that in this Rules 16 and 21 of the rules of the College of Engineering, Presidency the Engineer and upper subordinate (overseer) students of the College of Engineering, Madras, have to undergo a year's practical training after completing their theoretical course. This practical training is afforded mostly in Public Works divisions in which large works are in progress but a few students of the engineer grade are also sent to the Madras city water-supply and drainage works. Lower subordinate students (sub-overseers) passing out of the college have no such practical training. Lieutenant-Colonel Atkinson and Mr. Dawson are of opinion that one year's apprenticeship should be granted to every student passing out of a Civil Engineering College. The term of apprenticeship now fixed for the Engineer and upper subordinate students in this Presidency is therefore sufficient in the opinion of the two gentlemen. The question whether practical training should be extended to lower subordinates also was raised in the notes to G.O. No. 798, Educational, dated the 26th August 1913. Mr. James, Principal of the College of Engineering, did not then consider that practical training for these subordinates was necessary. But the Secretary (Mr. Francis) was of the opinion that the training should be extended to them. As no specific orders were passed on the point the question does not appear to have been further considered. The question of the suitability of the education now given in Engineering Colleges is under the consideration of the Public Works Department Reorganization Committee and it is submitted that further action in the matter may be deferred till the recommendations of that Committee are received.

Please see Secretary, Mr. Francis' note on page 6 of notes to G.O. 798, Educational, 26th August 1913.

Page 5 of notes *ibid.*

The Public Works Department may be left to deal with this question.

R.R.—20-6-17.

G.O. 40 W., 8th January 1917.

3. *Establishment of an employment bureau.*—Lieutenant-Colonel Atkinson and Mr. Dawson recommended the appointment of a controlling officer and the establishment of an employment bureau for the whole of India so as to ensure the permanent co-ordination of the relations between institutions and employers of labour. This Government was not in favour of the proposal but stated that "at present the number of trained students here who are unable to find work in their own Presidency is so small that there would be no field for any but a provincial employment bureau. Such a bureau is already in effect maintained by the Principal of the Madras Engineering College, who takes much pains to procure situations for students who have passed out of that institution". The Government of India, while concurring in the view that a controlling officer and employment bureau for the whole of India are not necessary, leave it to Local Governments to arrange for such provincial centre or centres for dealing with the question of employment as they consider suitable. In view of the remarks of this Government extracted above it does not appear that any action should now be taken in the way of organizing an agency for securing employment for technically trained men.

Paragraph 5, page 2 of Letter 799, Educational, 26th August 1913.

R.R.—20-6-17.

4. *Training of skilled workmen and children of artisans.*—The recommendation of Lieutenant-Colonel Atkinson and Mr. Dawson under this head is as follows:—

That the most promising method of training skilled workmen is to establish manual training schools for children in big centres and near big workshops; the boys to be apprenticed in workshops from the ages of 12 to 14 years; during the apprenticeship they are to be obliged to attend afternoon classes to complete their literary education and finally to obtain some theoretical knowledge of their work.

The Government of India, while not accepting the Committee's wholesale condemnation of existing industrial schools consider that further experiments should be made, when possible, in the direction indicated by the committee in the above recommendation. When the recommendation was considered by this Government in 1913 it was taken that the manual training schools contemplated in the recommendation were apparently of the nature of schools for which was approved in G.O. No. 1089, Educational, dated the 9th December 1912. The Government of Bombay has assumed that the system of apprenticeships referred to in the recommendation is the one proposed for adoption in connection with the scheme which was then under the consideration of this Government for instituting 200 State apprenticeships among the engineering shops in Madras City. It may be noted here that this scheme of State apprenticeships has since been abandoned and the Government recently sanctioned the opening of classes in plumbing and mechanical engineering for working artisans. The course in these classes lasts for six months and a report is due from the officer in charge of the Department of Industries on the result of their working. It is for consideration whether any special order should issue with reference to the recommendation of Lieutenant-Colonel Atkinson and Mr. Dawson. The Government of India consider that the schools for the children should for the most part confine themselves to the teaching of the three R's and drawing, and that, outside the system of apprenticeship, it should be possible to start in certain places central vocational classes. It will perhaps be sufficient if the resolution of the Government of India is communicated to the officer in charge of the Department of Industries. He may be left to address the Government in case he considers that action should be taken on any point.

Paragraph 196 (4), page 86 of report volume.

Pages 17 and 18 of Notes to G.O. 798, Educational, 26th August 1913.

Paragraphs 17 to 20 of the Bombay Government's letter to India on pages 9 to 11 of the volume of replies.

G.O. 621, Educational, 5th September 1911.

" 28 " 16th January 1912.

" 776 " 24th August "

G.O. 1092, Home (Education), 17th October 1916.

Industries on the result of their working.

P.A.H.—14-5-17.
R.R.—20-6-17.

S.K.—26-4-17.

5. *Instruction in Civil Engineering*—paragraph 5 of letter.—The Government of India state that the existing system of imparting instruction in Civil Engineering in central colleges should for the present be maintained pending the results of any further enquiry that may be made in connection with engineering education generally. Apparently the Government of India refer to the enquiry now being made by the Public Works Department Reorganization Committee. A proposal to open an Engineering school at Vizagapatnam is now under consideration * and, in that connection, the Public Works Department noted that it was unnecessary to await the recommendations of the Reorganization Committee. The question is purely one of local interest and there appears to be no sufficient reason to arrest its further consideration.

Vide page 3 of G.O. 40 W., 8th January 1917. * Orders since issued in G.O. 722, Home (Education), 31st May 1917.

6. The current may be recorded. Draft order is submitted.

N.K.—9-5-17.

The file may in the first instance be sent to the Director of Public Instruction for any remarks he may desire to offer with reference to paragraphs 2, 3 and 5 supra. The Chief Engineer, Public Works Department, may have then to see the file.

C. RAMANUJA ACHARIYAR—12-5-17.

E. A. HARVEY—14-5-17.

First, Director of Public Instruction.

R. RAMACHANDRA RAO—14-5-17.

OFFICE OF THE DIRECTOR OF PUBLIC INSTRUCTION.

I have no remarks to offer.

J. H. STONE—15-5-17.

HOME (EDUCATION) DEPARTMENT.

Submitted that the file may be sent to the Public Works Department for remarks.

S.K.—16-5-17.

N.K.—16-5-17.

C.R.—18-5-17.

R.R.—19-5-17.

PUBLIC WORKS DEPARTMENT.

Submitted. A scheme for the training of apprentices on a small scale in the Public Works Workshops has been introduced in G.O. No. 179 W., dated 30th January 1917.

A.M.—1-6-17.

Attention is invited to items (vii) and (viii) among the points referred for the consideration of the Public Works Department Reorganization Committee. These seem to cover, so far as engineering is concerned, the points noticed in paragraphs 3 to 8 of the Government of India letter.

R.K.—5-6-17.

G. D. PLUMMER—7-6-17.

D. MARSHALL—7-6-17.

S. B. MURRAY—9-6-17.

NOTES TO G.O. No. 1107, HOME (EDUCATION), 30TH AUGUST 1917

HOME (EDUCATION) DEPARTMENT.

The draft order submitted already is for approval.

S.K.—11-6-17.

N.K.—12-6-17.

C. RAMANUJA ACHARIYAR—13-6-17.

There is no point on which immediate action is called for except perhaps factory schools, paragraph 10. The Director of Industries will attend to them. Other matters requiring consideration are pending with the Public Works Department.

R. RAMACHANDRA RAO—20-6-17.

Mr. Innes u.o. for remarks if any.

P. R[AJAGOPALA ACHARIYAR]—22-6-17.

R.R.—23-6-17:

OFFICE OF THE DIRECTOR OF INDUSTRIES.

I am sorry for the delay in returning these papers. Mr. Fyfe has been on tour almost continuously for the last three months and I have been very busy and neither of us has had time really to study the file. I have however read the report and the Government of India's circular letter, and all that I think is necessary for the Government to do is to forward the letter to me for information and guidance.

2. As a matter of fact we are experimenting very much on the line recommended by Colonel Atkinson and Mr. Dawson. The Madras Trades School is a direct attempt on the part of the department to work in co-operation with employers of labour. I am making out the syllabus for the foremen's course or improver course at the Madura Technical Institute. Mr. Fyfe, Mr. Dunhill and I have proposed that no certificate or diploma should be given until the students have been through a practical apprenticeship in a commercial workshop, and if we can't get any commercial workshop to take these students on living wage, it is my opinion that it would be up to Government to give stipends to the students while they are apprentices. I am also investigating a scheme for resuscitating on a small experimental scale Mr. Clatterton's State Apprenticeship scheme. The Coimbatore Spinning and Weaving Mills and the Madras Engineering Works have already agreed to take apprentices, but before sending a scheme up to Government, I have been trying to get into touch with Mr. Todd, Agent of the Madras and Southern Mahratta Railway. Mr. Todd, I find, is quite keen on training properly the apprentices in the Perambore Railway Works, and I hope that the department will be able to co-operate with him. Mr. Todd and I have already had a preliminary discussion and we propose to have a fuller one, at which Mr. Fyfe and Mr. Sergeant of the Perambore Works will be present, early next month.

C. A. INNES—17-8-17.

HOME (EDUCATION) DEPARTMENT.

For orders whether the draft order already approved by the Secretary may issue.

S.K.—22-8-17.

N.K.—23-8-17.

C.R.—24-8-17.

Honourable Member would like to see Mr. Innes' note.

E. A. HARVEY-27-8-17

R.R.—28-8-17.

Thanks.

P. R[AJAGOPALA ACHARIYAR]—29-8-17.

Issue

R.R.—29-8-17.

[G.O. No. 1107, Home (Education), dated 30th August 1917.]

Technical education. (Education)
Receiving letter from the Govt of India
containing orders on the recommendations
made by Lt. Col. Atkinson and Mr. Dawson
on the ~~recognition~~ relations of technical
institutions & employers of labour in India.

READ AGAIN G.O. No., dated 191

READ ALSO:—

C. No. 1762, From the James H. Smith, No. 274, dated 23-3- 1917
(Deputy Com.)

" " " " , " " 191

" " , " " , " " 191

ORDER.

No. 1107, dated 30. 8. 1917

Records.

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2. The D.O. J.
a. Officer in Charge of the
a. D. W. J. ~~Department~~
Not for ST

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R.R.—20-6-17.

17 SEP 1917

2 NOTES to G.O. No. 1107, HOME (EDUCATION), 30th August 1917
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R.R.—20-6-17. 4. *Training of skilled workmen and children of artisans.*—The recommendation of Lieutenant-Colonel Atkinson and Mr. Dawson under this head is as follows:—

That the most promising method of training skilled workmen is to establish manual training schools for children in big centres and near big workshops; the boys to be apprenticed in workshops from the ages of 12 to 14 years; during the apprenticeship they are to be obliged to attend afternoon classes to complete their literary education and finally to obtain some theoretical knowledge of their work.

The Government of India, while not accepting the Committee's wholesale condemnation of existing industrial schools consider that further experiments should be made, when possible, in the direction indicated by the committee in the above recommendation. When the recommendation was considered by this Government in 1913 it was taken that the manual training schools contemplated in the recommendation were apparently of the nature of schools for half-timers in factories, the establishment of which was approved in G.O. No. 1089, Educational, dated the 9th December 1912. The Government of Bombay has assumed that the system of apprenticeship referred to in the recommendation is the one proposed for adoption in connection with the scheme which was then under the consideration of this Government for instituting 200 State apprenticeships among the engineering shops in Madras City. It may be noted here that this scheme of State apprenticeships has since been abandoned and the Government recently sanctioned the opening of classes in plumbing and mechanical engineering for working artisans. The course in these classes lasts for six months and a report is due from the officer in charge of the Department of Industries on the result of their working. It is for consideration whether any special order should issue with reference to the recommendation of Lieutenant-Colonel Atkinson and Mr. Dawson. The Government of India consider that the schools for the children should for the most part confine themselves to the teaching of the three R's and drawing, and that, outside the system of apprenticeship, it should be possible to start in certain places central vocational classes. It will perhaps be sufficient if the resolution of the Government of India is communicated to the officer in charge of the Department of Industries. He may be left to address the Government in case he considers that action should be taken on any point.

Paragraph 196 (4), page 85 of report volume.
Pages 17 and 18 of notes to G.O. 798, Educational, 26th August 1913.
Paragraphs 17 to 20 of the Bombay Government's letter to India on pages 9 to 11 of the volume of replies.
G.O. 821, Educational, 5th September 1911.
" 28 " 16th January 1912.
" 776 " 24th August "

G.O. 1092, HOME (Education), 17th October 1916.
E.A.H.—14-5-17.
R.R.—20-6-17.

S.K.—26-4-17.

5. *Instruction in Civil Engineering—paragraph 5 of letter.*—The Government of India state that the existing system of imparting instruction in Civil Engineering in Central colleges should for the present be maintained pending the results of any further enquiry that may be made in connection with engineering education generally. Apparently the Government of India refer to the ~~enquiry~~ now being made by the

Vide page 3 of G.O. 40 W., 8th January 1917. Public Works Department Reorganization Committee. A proposal to open an Engineering school at Vizagapatam is now under consideration * and, in that connection, the Public Works Department noted

that it was unnecessary to await the recommendations of the Reorganization Committee. The question is purely one of local interest and there appears to be no sufficient reason to arrest its further consideration.

6. The current may be recorded. Draft order is submitted.
N.K.—9-5-17.

The file may in the first instance be sent to the Director of Public Instruction for any remarks he may desire to offer with reference to paragraphs 2, 3 and 5 supra. The Chief Engineer, Public Works Department, may have then to see the file.

C. RAMANUJA ACHARIYAR—12-5-17.
E. A. HARVEY—14-5-17.

First Director of Public Instruction.
R. RAMACHANDRA RAO—14-5-17.

OFFICE OF THE DIRECTOR OF PUBLIC INSTRUCTION.
I have no remarks to offer.

J. H. STONE—15-5-17.

HOME (EDUCATION) DEPARTMENT.

Submitted that the file may be sent to the Public Works Department for remarks.

S.K.—16-5-17.
N.K.—16-5-17.

C.R.—18-5-17.
R.R.—19-5-17.

PUBLIC WORKS DEPARTMENT.

Submitted. A scheme for the training of apprentices on a small scale in the Public Works Workshops has been introduced in G.O. No. 179 W., dated 30th January 1917.

A.M.—1-6-17.

Attention is invited to items (vii) and (viii) among the points referred for the consideration of the Public Works Department Reorganization Committee. These seem to cover, so far as engineering is concerned, the points noticed in paragraphs 3 to 8 of the Government of India letter.

R.K.—5-6-17.

G. D. PLUMMER—7-6-17.
D. MARSHALL—7-6-17.
S. B. MURRAY—9-6-17.

HOME (EDUCATION) DEPARTMENT.

The draft order submitted already is for approval.

S.K.—11-6-17.
N.K.—12-6-17.

C.R.—13-6-17.

There is no point on which immediate action is called for except perhaps factory schools, paragraph 10. The Director of Industries will attend to them. Other matters requiring consideration are pending with the Public Works Department.

R.R.—20-6-17.

Mr. Innes u.o. for remarks if any.

P. R. [AJAGOPALA ACHARIYAR]—22-6-17.
R.R.—23-6-17.

OFFICE OF THE DIRECTOR OF INDUSTRIES.

I am sorry for the delay in returning these papers. Mr. Fyfe has been on tour almost continuously for the last three months and I have been very busy and neither

4 Notes to G.O. No. 1107, Home (Education), 30th August 1917
of us has had time really to study the file. I have however read the report and the Government of India's circular letter, and all that I think is necessary for the Government to do is to forward the letter to me for information and guidance.

2. As a matter of fact we are experimenting very much on the lines recommended by Colonel Atkinson and Mr. Dawson. The Madras Trades School is a direct attempt on the part of the department to work in co-operation with employers of labour. In making out the syllabus for the foremen's course or improver course at the Madura Technical Institute, Mr. Fyfe, Mr. Dunhill and I have proposed that no certificate or diploma should be given until the students have been through a practical apprenticeship in a commercial workshop; and if we can't get any commercial workshop to take these students on living wage, it is my opinion that it would be up to Government to give stipends to the students while they are apprentices. I am also investigating a scheme for resuscitating on a small experimental scale Mr. Chatterton's State Apprentices Scheme. The Coimbatore Spinning and Weaving Mills and the Madras Engineering Works have already agreed to take apprentices, but before sending a scheme up to Government, I have been trying to get into touch with Mr. Todd, Agent of the Madras and Southern Mahratta Railway. Mr. Todd, I find, is quite keen on training properly the apprentices in the Perambore Railway Works, and I hope that the department will be able to co-operate with him. Mr. Todd and I have already had a preliminary discussion and we propose to have a fuller one, at which Mr. Fyfe and Mr. Sergeant of the Perambore Works will be present, early next month.

C. A. INNES—17-8-17.

HOME (EDUCATION) DEPARTMENT.

For orders whether the draft order already approved by the Secretary may issue.

S.K.—22-8-17.

N.K.—23-8-17.

C. RAMANUJA ACHARIYAR—24-8-17.

Honourable Member would like to see Mr. Innes's note.

E. A. HARVEY—27-8-17.

R. RAMACHANDRA RAO—28-8-17.

Thanks.

P. R. [AJAGOPALA ACHARIYAR]—29-8-17.

Issue.

R.R.—29-8-17.

[G.O. No. 1107, Home (Education), dated 30th August 1917.]

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Home (R.T.) DEPARTMENT.

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