MISCELLANEOUS

Government of Madras.

HOME DEPARTMENT.

(EDUCATION)

FOR RECORD ONLY

G.O. No. 164, 13th February 1917

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GOVERNMENT OF MADRAS

HOME DEPARTMENT

(Education)

READ—the following papers :—

I

Letter—from K. T. B. TRESSLER, Esq., Director of Industries.
To—the Secretary to Government, Educational Department.
Dated—Madras, the 26th February 1915.
No.—E. 44.

In submitting herewith, in consolidated form, my proposals dealing with the question of technical education, I have the honour by way of preface to invite attention to the history of technical education in this Presidency.

2. The development of technical education until the year 1903 is given in a note submitted by Mr. Cardew to the Industrial Conference held at Ootacamund in 1908, and added as an appendix (A) to this letter. At that conference, the question of technical education was discussed in a comprehensive manner and certain resolutions were formulated which are given in appendix (B).

3. As will be observed from Mr. Cardew's note, technical education was, in the year of the Ootacamund conference, still in a somewhat primitive condition. During that year a more progressive policy was decided on, and as a first step in the direction of development the Madura Technical Institute was acquired by Government and plans were prepared for its conversion into a first-class centre for technical instruction. At the same time the question of a comprehensive system of similar centres of technical instruction in other parts of the Presidency was considered.

4. Of these centres Madras was one, and in G.O. No. 28, Educational, dated 16th January 1912, a committee was appointed to consider the question of a Government Technical school in Madras. The scope of the school was in this case limited to mechanical engineering and the committee submitted its report in March 1912.

5. In the course of investigation it was however found that there were very serious practical difficulties and drawbacks associated with the establishment of State-managed schools at other centres. As an alternative to the system of State-managed schools, as originally proposed, it was decided to develop existing private institutions at the required centres, this course appearing to represent both the simplest solution of the problem and also the one most likely to lead to effective results.

6. Accordingly negotiations were entered into with the following private institutions, viz. :—

St. Aloysius' Industrial school	Vizagapatam.
Local Fund Workshop	Cocanada.
Public Works Workshops	Dowlaishwaram.
Do.	Bezwada
St. Joseph's Orphan Industrial school	Tindivanam.
St. Francis Xavier's Industrial school	Tanjore.
St. Joseph's Industrial school	Coimbatore.
Basel Mission	Calicut.

7. Meantime considerable changes had taken place in the constitution of the department. The post of the Director of Industries was abolished by the Secretary of State early in 1911 and the special post of Superintendent of Industrial Education (subordinate to the Director of Public Instruction) created in its place, the officer holding this appointment dealing exclusively with technical education. This arrangement proved unsatisfactory in practice and the Government of Madras addressed the Secretary of State with a view to the restoration of the *status quo*. Orders were received, re-establishing the post of Director of Industries early in 1914, but during the interval, on account of uncertainty regarding the future and other causes, little progress could be made with the technical education schemes and when details came to be considered new difficulties appeared.

8. Mr. Cardew's note makes it clear that the existing system of technical education, evolved out of Mr. Grigg's original scheme in 1882 was in many respects unsatisfactory. Centring as it did around a system of "Technical Examinations" of the original South Kensington type, it lacked co-ordination with practical requirements. Hence, as a preliminary to any further development of technical education a new code was obviously necessary. Again, the scheme for the development of existing institutions to serve as centres of technical education, when practically considered, was found to require a great deal more working up before it could be reduced to a workable form.

9. Early in 1914 the Department of Industries was recreated and not till then did it really become possible to take active steps in the matter of technical education. Some little time previously the plans for the Madura Technical Institute had been completed and on the reconstitution of the department the work of preparing a draft code for technical education was taken in hand. With a view of making this code thoroughly practical in character, I suggested to Government the appointment of two committees : one representative of educational opinion, the other representative of technical opinion, to discuss the draft code. At the same time Government considered that the scope of the Madras Trade school, as outlined in the Government Order of 1912, might with advantage be extended so as to include trades other than mechanical trades and nominated a Committee (G.O. No. 780, 4th July 1914) to deal with this question of this school. So far as general educational questions connected with the code were concerned, Government did not consider it necessary to nominate a special committee, as advocated by me, but suggested that the committee appointed, the members of which represented technical opinion, might be invited to state their views and that individual representatives of educational opinion might be consulted unofficially.

10. This suggestion was followed ; on September 8, 9 and 11 the educational representatives held an unofficial meeting and on September 10 and 12 and November 27 the official Committee met. The only drawback of this arrangement was this : that the latter committee's report deals with two things : first (unofficially) with technical education generally, secondly (officially) with the practical details of the Madras Trade school, and is therefore of a composite character.

11. As regards the development of private institutions I have in a note, copy of which is appended—appendix C, explained the form which, in my opinion, Government action must take, viz., to build schools and leave them to private agency for a period of 20 years. In accordance with this view I have prepared specific proposals regarding such of the above mentioned institutions as I have so far been able to come to terms with, viz., St. Aloysius' Industrial school, Vizagapatam, Waltair, St. Joseph's Orphan Industrial School, Tindivanam, and St. Joseph's Industrial school, Coimbatore.

12. It is clear that the present position is rather involved and in order to keep the issues separate I propose to deal with the problem of technical education in the following letters :—

(1) General covering letter.
(2) (*a*) Reports of the official committee, and
(*b*) Do. unofficial committee.

(3) Proposals for the Madras Trades school based on the recommendations of the official committee—
  (*a*) Curriculum.
  (*b*) Buildings.

(4) Code for technical education based on the recommendations of the unofficial committee.

(5) Proposals arising from the code—
  (*a*) Endowment of the Victoria Jubilee Technical Institute, Bombay.
  (*b*) Normal Training school.

(6) Proposal for Waltair school.

(7) Do. Tindivanam school.

(8) Do. Coimbatore school.

13. Nos. (6), (7) and (8) will follow shortly. Other proposals of a similar character, *e.g.*, the development of the Local Fund Workshop at Cocanada, the Public Works Workshop at Bezwada, the St. Francis Xavier's Industrial School at Tanjore, etc., will be submitted as they mature.

14. To give Government some idea of the expenditure involved I give below an approximate statement of total cost :—

		Capital. Rs.	Recurring. Rs.
Madras Trades school, Washermanpet,	Building ..	40,000	
Do. do	Equipment ..	10,000	33,000 *
Do. Vepery—	Equipment ..	20,000	
Endowment of Victoria Technical Institute	.. ..	25,000	10,000
Normal Training school including— building for Vepery Branch of Madras Trade school	Land ..	70,000	1,500
	Building.	50,000	..
Waltair		80,000	Ordinary grant-in aid.
Tindivanam		70,000	
Coimbatore		70,000	
		4,35,000	

* Excluding Principal. The same staff is available also for the Normal Training school.

15. Before anything can be done it is necessary that my proposals should be generally approved or rejected. Possibly, however, there may be difficulties in the coming year on account of shortage of funds and in this case I recommend that my proposals be taken up as follows :—

The scheme that can, with the least disadvantage, be allowed to lie over is that for the endowment of the Victoria Technical Institute.

Further, considerable changes will have to be made in the Tindivanam and Coimbatore schools before they come up to the standard required by the new code, and I think it will be sufficient for the present if the land is acquired—merely as an earnest of Government intention and an encouragement to the schools to carry out their reforms. The land acquisition will probably not cost more than Rs. 10—15 thousands.

16. The Waltair school should be pushed on with. This scheme has now been hanging fire for four or five years and some sort of action would appear to be imperative. Moreover this school is already up to standard: the managers have a good deal of plant which they will lend to the school for a time, so that the cost of development will be comparatively small. For the former reasons also, the school is likely to develop into a useful centre of instruction much more rapidly than any other.

17. The establishment of a Normal Training school is an immediate necessity and this part of the programme must be carried out at the earliest possible date. In connection with this school that part of the Madras Trades school which is to be located at Vepery can be developed without much extra cost, but if funds do not permit of it, I would suggest that the other part of this Trades School to be located at Washermanpet be held over for a time.

18. No recurring expenditure can in any case be incurred during 1915–16 as none of the schools will be ready before that date. My minimum scheme for expenditure therefore works out as follows :—

—	—	Capital 1915-16.	Capital 1916-17.	Recurring. 1916-17.	Capital 1917-18.
		Rs.	Rs.	Rs.	Rs.
Normal Training school	Land	70,000*	..	33,000	12,000
	Building	30,000	20,000		
	Equipment	6,000	..		
Waltair school	Land	2,000	..	Ordinary grant-in-aid.	
	Building	40,000†	..		
	Equipment	..	20,000		
Madras Trades school, Washermanpet.	Building	..	40,000	Included in Normal Training school.	
	Equipment	..	10,000		
Endowment of Victoria Technical Institute, Bombay.	....	..	25,000	10,000	
Tindivanam school	..	15,000	1,35,000	Ordinary grant-in-aid.	
Coimbatore ,, ...	....				
Total ..		1,63,000	2,60,000		

* Part payment may be made by the award of compensation land elsewhere.

† Rupees 10,000 to be budgetted this year.

In conclusion I wish to express my indebtedness to the various gentlemen of the Committees for the extremely valuable assistence they have rendered me in the preparation of these schemes, and to Dr. Marsden for his work in connection with the Committees.

Appendix A.

Note on technical education in Madras By the Hon'ble Mr. A. G. Cardew. Industrial Conference, Ootacamund, 1908.

The modern development of technical education in Madras owes its origin to the late Sir Mountstuart Grant Duff who was Governor of this Presidency from 1881 to 1886. The Education Commission of 1882 had left the subject of technical education untouched. In their instructions to the Commission the Government of India, as yet intent only on literary education, had remarked that to extend the enquiry to technical education "would expand unduly the task before the Commission." In Madras the College of Engineering, the Agricultural College, Saidapet, and the School of Arts were already in existence, but no attempt had been made to develop any general system of technical education. The only industrial schools in the Presidency were two orphanages at Rāmnād and Nazareth, two schools for Eurasians in Madras and a small school under missionary management in the Tanjore district. Sir Mountstuart Grant Duff's attention appears to have been drawn to the subject of technical education by the report of the Royal Commission on Technical Education in England which was appointed in 1881 and which submitted its final report in April 1884. On the 1st September 1884 the late Mr. Grigg, then Director of Public Instruction, was called on to submit proposals for the encouragement of scientific and technical education in this Presidency.

2. Mr. Grigg's proposals, contained in letters, dated 3rd September 1884 and 31st March 1885, set out a comprehensive scheme of development divided into three main sections. The first place was given to the establishment of a system of higher examinations in technical subjects. Mr. Grigg believed that "to institute public examinations in any suitable branches of knowledge is to create a demand for instruction in them." He accordingly proposed to start examinations in some sixty branches of technical science, art and industry. But he did not rely solely on examinations. The second part of his scheme included the provision of grants-in-aid to institutions providing facilities for industrial and technical education and the grant of scholarships to pupils undergoing such instruction, besides grants for machinery, plant, apparatus and chemicals. These provisions were to be embodied in a special chapter of the Grant in-Aid Code and the grants were on a liberal scale, 25 per cent above the standard rate. Thirdly, Mr. Grigg proposed the development of the College of Engineering, the School of Arts and the Agricultural College into institutes dealing with the several connected branches of technical works. The College of Engineering was to teach the various branches of Engineering, with subsidiary subjects, machine construction and the like. The School of Arts was to add to its curriculum decorative metal work, wood-carving, cabinet-making, furniture and architectural wood-work, pottery, glass manufacture and carpet-weaving. The Agricultural College was to teach, besides agriculture, agricultural chemistry, geology, physiography, forestry and surveying, plan-drawing and veterinary surgery and medicine. Improved provision for instruction in biology and chemistry was to be made in the chief first-grade colleges, while practical training in industries was to be provided in the workshops of the Madras Municipality and Madras Railway.

3. Mr. Grigg's proposals were favourably received by Government. In G.O. No. 377, Educational, dated 3rd June 1885, high appreciation was expressed of the care with which the scheme had been drawn up. A Committee to elaborate the plan of technical examinations was

at once appointed. The new chapter of the Grant-in-Aid Code was sanctioned and the "gradual extension of work" at the Agricultural College and the School of Arts was approved. But the extension of the scope of work undertaken at the College of Engineering was negatived, and no notice was taken of the suggested use of Railway and Municipal workshops for practical training. The Government, like the Director, gave the first place to examinations, and prompt action to start these tests was taken. The Committee appointed to fix the character of the syllabuses and the details of the examinations submitted its report in November 1885 together with a draft notification and syllabuses for examinations in 63 subjects, and in G.O. No. 198 of the 31st March 1886, Educational, the notification and syllabuses were finally approved and sanctioned and the first technical examinations were ordered to be held in the month of August following.

4. The examinations thus created were originally divided into two grades called Preliminary and Advanced; but when the Middle School Examination was abolished in 1889 the scheme of technical examinations was revised in order to include those elementary technical subjects which had hitherto formed a part of that examination and the technical examinations were now divided into (1) the Lower or Elementary examination, and (2) the Higher examinations in two grades, the Preliminary and the Advanced. In December 1891, the name of the examinations was changed to the "Government Technical Examinations" and the three grades were designated Elementary, Intermediate and Advanced, and in 1892 the notification and the syllabuses relating to the examinations were again revised and received their existing form. The examinations, which now include 93 subjects, are regulated by Notification No. 18 of the 25th January 1893, which declares their object to be "the encouragement of scientific and technical instruction, with special reference to manufactures and industries and generally to the necessities of the practical side of life."

5. These technical examinations have attracted a considerable number of candidates. In the ten years ending 1906 as many as 22,527 candidates have passed the three stages—Elementary, Intermediate and Advanced. An analysis of these passes is given below. Table No. 1 shows the number of candidates who have passed in each group and subject in these examinations. It will be observed that out of 22,527 passes as many as 18,954 are accounted for by five groups of subjects:—

(1) Agriculture	1,062
(2) Sanitary Science	1,483
(3) Civil Engineering	3,456
(4) Commercial subjects	5,203
(5) Drawing	7,750

In the remaining subjects the great mass of passes have been in the Elementary or Intermediate grades, only 138 passes in the Advanced examinations having been secured in ten years. In Chemistry, the foundation of so many industries, no pass in the Advanced examination has been secured, and the total number of passes in the Elementary and Intermediate tests has been only 49.

* * * * *

The progress which has been brought about by the institution of these examinations and the provisions which were added to the Grant-in-Aid Code will be apparent from Table No. III which shows the technical and industrial schools now existing in the Presidency. In the educational returns these are divided into two classes: first, higher class schools in which the standard of instruction is equal to the elementary or higher grades of the technical examinations, and second, lower class schools which adopt a lower standard regulated by the Madras Education Rules. The former class of schools is again of two kinds: (*a*) those which give instruction in subjects coming under two or more groups of the Technical Examination scheme, and (*b*) those which give instruction in only one such group.

* * * * *

8. The cost at which this progress in technical education has been made will be apparent from the following figures, in which the expenditure on technical education during the last ten years is compared with the total expenditure on education:—

Expenditure on Technical Education.

Year.	Total expenditure to education.	Total expenditure on technical education.
	RS.	RS.
1897–1898	66,86,435	1,87,776
1898–1899	69,12,173	1,96,084
1899–1900	69,29,266	2,19,701
1900–1901	71,76,850	2,17,638
1901–1902	76,61,012	2,66,958
1902–1903	84,81,460	2,69,351
1903–1904	86,22,864	2,48,930
1904–1905	86,50,460	2,90 699
1905–1906	90,84,226	2,98,761
1906–1907	94,59,318	2,99,365

9. It will be apparent from these facts and figures that, though some progress has been made in technical education since Sir Mountstuart Grant Duff first drew attention to the subject in 1884, and though some twenty-five lakhs of rupees have been spent thereon during the last ten years the general result is, as the Director of Public Instruction remarked in his report for 1906–1907, still far from satisfactory. "Out of the large population of this Presidency" he wrote "less than three thousand children were receiving technical instruction in the various handicrafts and of these less than nine hundred were non-Brahmin Hindus, the class of the community "to which the bulk of hereditary workers in wood and metal and textile fabrics belong. There is "as yet little demand for technical education, and the little advance that has been made has "practically left unaffected the great mass of the industrial population." It will be noticed that of the five thousand children shown in table IV as receiving technical instruction a large proportion were studying such subjects as book-keeping, commercial correspondence and drawing.

10. The causes which have led to the failure of Mr. Grigg's scheme of 1884–1885 are not far to seek. In the first place only part of that scheme was carried out, some of the most valuable suggestions contained in it being allowed to drop out of sight. The attempt moreover to create examinations without first providing qualified teachers and adequately equipped training institutions was to reverse the true order of progress. Most important of all was the neglect to bring the scheme of technical education into relation with the industrial needs and conditions of the country. It was not sufficient to draw up syllabuses ranging from copperplate engraving to embroidery. Some effort was necessary to connect the new system of technical education with existing industries, the great hand-loom industry, the indigenous dyeing industry, the nascent cotton factory system and so on. Even in providing scholarships for the encouragement of handicrafts, sufficient care was not taken to see that they were reserved for members of the artisan classes. The scholarship notification, which is published annually in the *Fort St. George Gazette* stipulates only that the candidates shall have been for a year a student in a recognised technical class, and the scholarships given by local bodies have not usually even this stipulation. The caste system of the country being thus ignored, the scholarships too often fell to youths who had not the least intention of following the industry as a livelihood and who merely drew the scholarship while it lasted and then betook themselves to the role of clerk, peon, policeman or whatever the customary occupation of their class might be. It is thus not surprising that though a large number of persons have passed the technical examinations which Mr. Grigg established the general effect of the scheme on the industrial progress of the country has been slight.

* * * * *

Appendix B.

Resolutions passed at the Industrial Conference, Ootacamund, September 1908.

* * * * *

Technical Education.

12. This subject should be divided into two parts:—
(i) Industrial Instruction.
(ii) Technical Education.

13. The object of technical education is to train a student to apply theoretical principles to practical purposes and to make use of theory in solving such problems as arise in carrying out manufacturing processes. Technical education must be based upon scientific education.

14. The object of industrial education is instruction in the performance of definite operations and need not necessarily involve the teaching of general principles but only of their application.

I. Industrial Instruction.

15. Industrial instruction should arise out of and be developed to suit the needs of some existing industry started for experimental purposes.

16. It is desirable that a list should be made of the trades and manufactures in this Presidency which are of sufficient importance to justify the establishment of special industrial schools in relation to them.

17. The Conference is of opinion that industrial schools should be located in a centre where the connected industry is carried on, and there is no objection to two or more industries being taught in one institution. It is desirable, where an industry has been started for experimental purposes, that industrial classes should exist in connection with it.

18. The number of industrial schools in the Presidency should be increased and the status of those already established should be improved.

19. The primary object to be aimed at by industrial schools should be the improvement of the quality of the work of the hereditary artisan classes. A secondary object will be the instruction of others than these, who may submit themselves to training. Such schools need not necessarily be self-supporting but the courses of instruction should direct attention to the importance of efficient and economical manufacture and of arriving at the true cost of the work

turned out. The success of a school, in the matter of grant-in-aid, should be judged of largely by the economy of the outturn even if such outturn should not contribute appreciably to reducing the cost of the working of the school itself.

20. In Industrial schools it is not objectionable to employ workmen with whom the boys may be associated in the execution of orders. It should be an important function of such schools to provide advanced courses of instruction for craftsmen and artisans who have already learnt their trade in the bazaar or village. No general education classes should be attached to these schools but, as far as possible, only pupils who can read and write their own vernacular fairly well should be admitted. Those who cannot may be admitted as half-time pupils. The work in them should be more intimately connected with the requirements of the people of the country than has hitherto been the case.

21. The management of industrial schools other than those started by private agencies should be vested in the department, and the appointment of a whole-time Inspector of Industrial schools is recommended.

22. Scholarships or stipends may be given to students in industrial schools, but such scholarships or stipends should be confined to members of the artisan castes or to others whose families are already engaged in the trade. Wages may be paid to those who are capable of doing remunerative work.

23. In view of the expected increased use of machinery in agriculture and in village industries, the Conference is of opinion that efforts should be organised for passing large numbers of the hereditary village artisans—chiefly smiths and carpenters—through the well-equipped workshops which are usually to be found at district headquarters, whether in charge of the Public Works or the District Board Engineers, and that the suitable equipment of such shops, for the purpose in view, under the advice of the Director of Industries would be a proper outlet for the expenditure of public funds.

24. It is also desirable that skilled mechanics qualified to instruct village artisans in accuracy of work, in the use of special tools, and in the repair or manufacture of simple machines, such as iron ploughs and agricultural implements, iron and sugarcane mills, etc., should tour in the villages and hold free instructional classes at various centres.

25. The Conference recommends that a few simple text-books relating to the industries of the Presidency may be prepared and translated into the vernaculars and made available to the public on payment.

26. The Conference is of opinion that provision should be made in the curriculum of studies of all secondary schools for males for compulsory manual training including the use of tools during certain hours in the week.

27. It is desirable that local industrial committees consisting of persons in the trade or especially interested in industrial work be formed for assisting the Director of Industries with their advice.

II.—Technical Education.

28. The Conference is of opinion that it is desirable that the control of any Technological Institute and of technical education should be under the Director of Industries.

29. The College of Engineering in Madras should be expanded into an Institute of Technology with complete laboratory and workshop equipment; and education should be imparted in it in Engineering in all its branches, in Applied Chemistry and such other technical subjects as are suited to the needs of the country.

30. It is desirable that arrangements should be made to enable students from this Presidency to take full advantage of the facilities offered by the Indian Institute of Science at Bangalore.

31. Scholarships should be provided to enable young men in the Presidency to take advantage of facilities for technical education in other parts of India.

Appendix C.

Note.

The question of providing more extensive facilities for Industrial Education has for some time past been engaging the attention of Government, but no definite system has as yet been evolved, partly on account of the indefiniteness of the Educational policy hitherto pursued and partly on account of the constant changes in the character of the proposals submitted from time to time by the school authorities concerned.

2. It has been evident to me from the first that under existing conditions it would be impracticable for Government themselves to conduct a large number of institutions and I have throughout regarded the development of certain existing schools now under private management as the only way of providing extended facilities for Industrial education. This principle I still adhere to.

3. In the practical application of this principle, I proposed in the first instance to start composite schools, *i.e.*, to allot funds to selected schools for the development of their premises, the schools themselves also subscribing part of the cost of the extensions contemplated. This scheme is all very well on paper, but when I came to work out practical details I found firstly that most schools would be unable to subscribe an appreciable amount towards the extension and secondly that the question of dual ownership that would arise would make any dissolution of the agreement arrived at between the Government and the school extremely difficult and unpleasant.

4. I do not apprehend any serious differences of opinion between Government and the management or if such differences did arise, that they could not be settled by an amicable agreement. It is clearly to the interest of both parties to continue any arrangement made for at least the full period of the agreement (20 years) and it is reasonable to suppose that both sides recognize this fact and will try to work in harmony. At the same time, in order to avoid any possibility of misunderstanding, I consider it essential at the very outset to state specifically how the terms of the agreement would operate in every conceivable contingency and for this reason I think it necessary to discuss the eventuality of the agreement being terminated.

5. Under the dual ownership scheme the termination of the agreement might be a matter of considerable difficulty. The scale of the proposed schools would probably be in excess of that which the school authorities themselves would require: one part of the school buildings would probably be the absolute property of the school authorities — the other being Government property. Most of the school authorities are missionaries and the school would probably have been built in the middle of a mission settlement on mission land. The mission would be given the option of buying out Government, but it is doubtful if they would do it and if Government bought out the mission there would almost certainly be unpleasantness over the acquisition of their property and subsequent trouble when another agency — either Government or a private body—took over the school premises for purposes of independent instruction.

6. For these and other reasons I have come to the conclusion that the only workable plan is for Government to construct schools of its own and lease them to private bodies to work, the full time of the lease (in accordance with the usual Government rule) being 20 years.

Under this scheme the general conditions are as follows.

7. The schools must be built on Government land, and all the buildings will be Government property. It may prove convenient to the leasing body to have the school built near their own premises on land owned by them. In this case the land must be sold by them to Government outright. Government must also have the right of purchasing at any time any building situated on this land at a price to be fixed before the agreement is entered upon.

In such a case, when the land has been purchased from the lessee the buildings put up by Government will become the absolute property of the lessee after 20 years continuous lease. When the land is Government land the buildings also become the property of the lessee after the period above stated, subject to the condition, however, that ground rent is paid to Government and that Government is at liberty to resume the land and buildings *without compensation* if they cease to be used for purposes of Industrial Education or if the land is required by Government for public purposes.

8. The lease may be terminated by Government on account of non-fulfilment of the Government rules by the lessee on account of insufficiency of pupils (the average attendance should not fall below 30) or on account of the abandonment of Industrial Education by the lessee. When the reason for the termination of the lease is default by the lessee due notice will be given and the lessee will be allowed a year in which to rectify the defects brought to notice. If, after that period, the condition of the school is not satisfactory the grant may be stopped altogether. If, after another year the school still fails to satisfy the requirements of the Code the lease will be stopped.

The lease may be terminated by the management on giving two years' notice.

9. When the school is built on land purchased from the school authorities, these authorities shall in the event of a cancellation of the lease have the right of pre-emption at the following rates:—

Land—Original purchase price.

Buildings—Original value less 2 per cent annual depreciation.

Plant—Original value less 8 per cent annual depreciation.

Payment being made in three equal annual instalments.

If the school authorities fail to complete payment, Government shall have the right of refunding the amount already paid and taking over the school or if the balance is small, to remove and use for their own purposes any plant or movable fittings of value equal to the sum owing, or to close the transaction in any other manner that may appear desirable.

If the authorities do not wish to exercise the right of pre-emption Government shall have the right of taking over the school *in toto* on payment to the mission of the predetermined value of the buildings erected by the authorities on the site taken over.

When the school is situated on land not purchased from the school authorities, Government shall, in the event of a cancellation of the lease be at liberty to dispose of the property at its discretion.

10. During the time that the school authorities are in charge of a Government school they shall be responsible for the maintenance of the plant and buildings.

The schools would be Government schools and as such no religious instruction could be allowed in the premises. Different denominations would also have to agree to hostels of other denominations being erected and placed under the management of wardens of that denomination if required. Subject to the condition that all admissions would have to be made on ability, the management would be entitled to nominate 40 per cent of the pupils to be admitted the remaining 60 per cent being open.

II

Letter—from K. T. B. Tressler, Esq., Director of Industries.
To—the Secretary to Government, Educational Department.
Dated—Madras, the 26th February 1915.
No—E. 44.

I have the honour to submit herewith for approval my draft code for technical education. I am conscious of its imperfections, but in extenuation must explain firstly that it has had to be prepared in such time as could be spared from ordinary routine work and secondly that it is a work of an entirely novel character in India and had therefore to be undertaken without any guidance in the form of accumulated experience.

2. With a view to preparing the code, I last year spent a portion of my leave in studying the system adopted by the London County Council Educational Authorities: I have also to some extent followed the French and Belgian systems as illustrated by the Ecoles des arts et des métiers at Lille, Charleroi and elsewhere. I had intended to study the German methods also, but my time at home did not permit of my proceeding there.

3. It will be observed that I have drawn a sharp line of demarcation between technological and industrial education, as I define these terms in the code: also that the code deals mainly with the latter type of education.

4. In the preparation of this code I have paid due attention to the recommendations of the un-official committee convened by me for the purpose of discussing technical education and to the recommendations of the official committee convened by Government in G.O. No. 780, Educational, dated 4th July 1914. The recommendations are enclosed as appendices (A and B).

5. As regards technological education only two points call for the consideration of Government. The first is my proposal to endow the Victoria Technical Institute, Bombay, so as to acquire a prescriptive right to send students there. After mature consideration, I have come to the conclusion that under existing conditions it is very much cheaper and more satisfactory to deal with technological education in this manner than to try experiments of our own. I enclose as an appendix (C) a report on the Victoria Technical Institute written after my visit there in October. My suggestion is a donation of Rs. 25,000 and an annual subsidy of Rs. 10,000 as explained in another letter.

6. The second point is that of scholarships and stipends. It will be observed that I propose an all-round stipend of Rs. 10 per mensem for all pupils sent to Bombay and an extra Rs. 25 for a limited number who are granted scholarships. The expenditure on scholarships Government can control by limiting the number. As regards stipends the Government liability would at first sight appear to be unlimited. Actually, however, these stipends are for "approved" pupils only and "approval" lies at the discretion of the Director. This officer is scarcely likely to approve of anything but really promising material, and if the material is promising it seems a false policy to limit the numbers under training for the sake of the saving of a few hundred rupees.

7. During the present year six scholarships were offered at Rs. 30 per mensem. From this figure it may be argued that the payments I propose are reasonable. Of the applicants I should regard four or so as fit for scholarships and six more as

suitable for training. I do not anticipate therefore that during the next five years the average number sent to Bombay will exceed twenty and if we allow five scholarships the cost of the aid to pupils is—

	Rs.
Sixty pupils (3 years) under training at Rs. 120 per annum ..	7,200
Fifteen scholars (3 years) at Rs. 300 per annum	4,500
	11,700

This scheme of scholarships and stipends requires the approval of Government.

8. As regards the system of industrial education proposed in my code, I have been compelled, in order to satisfy all requirements, to provide for five different types of instruction (excluding popular lectures). What the schools require is a system of education that takes in entirely raw material and turns out a hall marked workman or craftsman. This system I have called the regular course of industrial education.

9. As applied to schools it consists of three stages: an elementary practical training stage (practice stage), a practical training stage in which work is carried out on commercial lines (workshop stage), and a theoretical training stage in which pupils of promise learn something of the theory of their work. But practical work as part of a school course of training is a purely artificial arrangement and a modification of this "regular education" system provides also for practical experience being acquired in the normal manner in a workshop. In such cases, however, the training may require to be supplemented by demonstration and instruction and this adjunct to practical training acquired in a workshop is represented by "extension classes."

10. In addition, facilities must be provided for men of ability to go beyond the average. These facilities are provided by the "High proficiency courses."

In all these cases the scheme of instruction applies only to individuals who are qualified or are about to qualify practically in the subject in which instruction is given. But there appears to be a demand also for a type of instruction that does not provide a complete course of instruction but merely affords opportunities for individuals interested to learn something about a trade. Those opportunities are provided by the "Trade instruction classes" which are also of a purely practical character.

Finally there is a demand for theoretical instruction in subjects not included in the regular courses and to meet this demand the fifth type of instruction is provided.

11. Except in the regular courses of education, the training provided is not complete and no certificates are to be awarded. The other courses are provided to meet a popular demand but do not receive the hall mark of the department. The principle underlying my scheme is that practical training is the essential feature of industrial education. This is what the regular course is intended to secure and no certificates are given except when the practical training has been approved by careful examination. Further, theoretical instruction is limited to pupils who have been approved by the department as likely to profit by this kind of instruction and is deferred until the practical training has reached a point at which there is strong reason to suppose that it will be duly completed. My object here is to prevent pupils getting a smattering of theoretical knowledge without a thorough practical backing.

12. In Industrial schools, only the regular courses are provided and the system of teaching grants is intended to be such as to give a minimum to the schools that only provide partial instruction and a maximum to those that turn out finished workmen. How the scales proposed will work out in practice I cannot say: they must be regarded as tentative. If schools continue to be conducted on the present lines the grant will be much the same as it is now, but schools will naturally change their methods and how the grant will change I cannot predict. The best schools will certainly get a much higher grant than before, but that is only as it should be. I reckon that a good school should get Rs. 3 — 5,000 grant annually The teaching grant is now about Rs. 30,000 per annum. I do not think it will rise much above Rs. 60,000 for sometime to come in consequence of the introduction of the new scale even if it does we will get better value for money than we do now.

13. As will be observed, the idea is to give—

(i) Small staff grant plus small capitation grant for practice stage

(ii) Larger staff grant plus larger capitation grant for workshop stage

plus also an extra deferred capitation grant on practice stage, the intention being to encourage as far as possible the complete training of pupils. At present schools draw the bulk of their grant on behalf of pupils who leave after the first year or two and are therefore industrially valueless.

14. The scale of teaching grant proposed requires the approval of Government. The building and furniture grants are worked out on the same lines as those in the Department of Public Instruction.

15. As regards examinations I propose to break away entirely from the present system of Technical Examinations. These examinations I regard as useless—at least so far as my own subjects are concerned—principally for the reason that they convey no evidence whatever of practical training. These technical examinations may serve a useful purpose in other ways and I do not therefore press for their abolition. But so far as my department and my work are concerned I want something much more practical. My suggestion is to appoint an Examination Committee consisting of individuals connected with industry and to invite them to nominate examiners. The character of the examination is a technical matter that I need not here enlarge upon, but Government approval is required for the system of selection of examiners proposed by me.

16. Perhaps the most important part of the Code is the proposal for a normal training school. What lies at the root of most of our difficulties in connection with technical education is the fact that we have no qualified or competent teachers. The school authorities themselves are the first to recognise this need that if we are to do any good at all we must have a normal training school as soon as possible.

The system of stipends for teachers under training is the same as that adopted in the Department of Public Instruction.

The approval of Government for this proposal is also required. Definite proposals are submitted in another letter.

17. Otherwise the Code deals with purely technical details that do not appear to call for discussion or embodies principles that have already been approved in the Department of Public Instruction.

18. This Code must naturally be regarded as tentative and its provisions will not be enforced rigidly for a period of five years after adoption. During the transition period grants will be allotted on the present basis.

19. I have the honour to request early orders on the Code so that it may be circulated to schools and so enable them to make a start with reorganization.

Appendix A.

Recommendations of an Un-official Committee suggested in G.O. No. 833, *Educational, dated* 16*th July* 1914.

Resolved that the Committee approves in general of the scheme of industrial education as drafted by the Director of Industries.

2. This Committee strongly recommends that the Government of Madras arrange for the establishment at an early date of a Teachers' Training School at Madras in connection with the scheme of Industrial Education.

3. Resolved that the Committee further recommends that Central Industrial Schools be established at convenient centres, as a part of the scheme of Industrial Education to deal with local industries as set out in the resolutions of the Ootacamund Conference in September 1908.

4. Resolved that in the view of this Committee the present technical examinations do not serve as a satisfactory test of the capacity of a pupil in industrial subjects and that special examinations in such subjects, to be conducted by practical men, should be arranged for.

5. Resolved in view of the extreme importance of cost keeping in all classes of manufacturing industry, that provision be made for training in works accountancy.

6. As existing Government workshops offer excellent facilities for practical training the Committee suggests that these should be properly organised for industrial training without detriment to meeting the wants of existing departments of Government and that, wherever necessary, industrial schools for imparting instruction in the school stage be also provided in connection with them.

Appendix B.

Recommendations of the Committee appointed in G.O. No. 780, *Educational, dated 4th July* 1914, *to consider certain questions relating to improvements of Industrial and Technical Education in the north of the City of Madras.*

This Committee accepts the system of division (as suggested by the Director of Industries) of Technical Education into two classes of Technological and Industrial and approves of the Director's proposal to aim at the improvement of industrial education.

2. This Committee having heard the report of the Director upon his visit to the Victoria Technical Institute, Bombay, is of the opinion that for the present the arrangement he outlines for dealing with any demand for Technological education is adequate.

3. With regard to regular and complete courses of training as given in the Draft Code this Committee is unable to express any opinion upon the value of the "Mechanism" proposed but lays stress upon the final examination tests being of such a character that the results will testify to the suitability of those who pass them for industrial employment. The Government technical examinations have not, so far as they deal with trades, supplied such a test and it is considered essential that in the examinations it is proposed to introduce the examiners should be actively employed in the trade or profession in which they are examining.

4. The Committee is of opinion that the nomination of examiners should be entrusted to a Board of Representative employers, to be presided over by the Director of Industries.

5. The Committee is of the opinion that regular and complete courses of instruction do not entirely provide for industrial requirements and recommends that "Extension" courses should also be provided, in the Madras Trades School, for subjects such as Fitting and Turning, Blacksmith's Work, Foundry Work, Carpentry and Joinery, Plumbing and Sanitary Work, Brick Work and Masonry, Electric Wiring and Fitting, Motor Car Work and Motor Car Driving, Weaving and Dyeing, Metal Work and Metal Spinning

6. The Committee further recommends that facilities should be provided for such general education by means of evening classes as may be necessary for a pupil to take advantage of the Trade school course, it being a condition for admission to the classes however that pupils should be *bonafide* industrial workers or apprentices.

7. The committee considers the proposed Washermanpet site to be the most suitable centre for the teaching of Engineering Trade subjects, but it is of opinion that for general subjects another site would probably be more central and recommends that provision should be made in the Poonamalle High Road adjoining the Director's office for another branch of the Trade school.

8. The Committee considers a system of stipends to apprentices to be objectionable. It is however recognised that financial assistance may in some cases be necessary but instead of fixed stipends, it recommends the grant of scholarships to individual cases.

9. The Committee is not in favour of the provision of hostel accommodation in connection with this school.

10. It is considered essential that for teaching purposes every effort should be made to secure the partial services of individuals possessing practical experience of the subjects they teach, and is of opinion that provided suitable remuneration be given it will in most cases be possible to arrange for the part-time services of individuals actually practising the trade to be taught. The committee regards it desirable to fix the permanent staff of the trades school at the minimum possible limit. Except for the teaching of general literary and scientific subjects, it will in their opinion of unnecessary to employ any regular whole-time teachers.

11. The committee anticipates that a considerable time may elapse before a building scheme in connection with these proposals matures and it recommends that, if possible, work should be started in a rented building. There appears however some doubt as to whether a suitable building will be available near either of the sites proposed for these trade schools and the committee accordingly recommends that permanent arrangements should be made as expeditiously as possible.

Appendix C.

Note on the Victoria Technical Institute, Bombay.

Technical workers in any industry may be divided into two distinct classes: those who control operations and those who actually perform them. The character of the training required is different in the two cases and in the proposals I have prepared for the development of technical education in Madras, I have accordingly drawn a sharp line of demarcation in the higher, what I term "Technological" and lower, or "Industrial", types of education, these two types corresponding to the two classes of workers.

2. I have further made it clear that my proposals extend only to the provision of further facilities for industrial training and are purposely so formulated as to avoid any encroachment on the sphere of technology.

3. Apart from other important differences between the two types of technical education one of the most clearly defined is that of educational qualification. To profit by a technological training a pupil must have a good general education: in the case of industrial training the amount of general education required is only moderate. In my proposals the highest standard of general education fixed for any subject is the third or fourth form and is in many cases lower. This is the maximum possible for an industrial school. For a technological school the Matriculation standard is the minimum qualification to be demanded.

4. The environment is also quite different in the two cases. In an industrial course (except in the preliminary period) the teaching is to be regarded merely as an adjunct to work under practical commercial conditions, that is to say, the pupil spends most of his time in practical environment. In a technological course the teaching element predominates and although the pupil may do a good deal of practical work he is essentially a student working in a more or less artificial and academic environment.

It follows as a corollary that a school providing an industrial course requires little equipment and little in the way of laboratory accommodation, whereas a technological institute must be fully equipped.

5. It has been suggested that the institute I propose to construct in Madras for the purpose of providing industrial instruction should be modelled on the lines of the Victoria Technical Institute, Bombay, and I have accordingly inspected this institute.

6. When it is explained that the general education qualification for admission to this institution is the Matriculation standard and that pupils undergo a regular whole-time course of instruction at the institute, and that the aim is to make the college a residential one, it will be apparent that quite apart from the actual character of the teaching, the general principles on which the institute is conducted are of a character according well with a technological but entirely unsuited to an industrial course of training. This fact has been clearly recognised and the Victoria Technical Institute does not claim to be anything but a technological institution. As such it falls outside the sphere of my proposals.

7. I may add that in the matter of classification of technical schools the Bombay Government and the Council of the Institute seem with certain changes in nomenclature, to have adopted an exactly similar system to that proposed by me and I believe that the fundamental distinction between what I have termed industrial and technological training is recognised there as clearly as I desire to make it here.

8. It may be accepted as a starting point for further discussion that a system of education similar to that provided at the Victoria Technical Institute cannot be introduced into my scheme, which has for its object merely the education of the artizan and working classes. Ultimately perhaps the Director of Industries may be compelled to deal with higher technical education also, but at present the department is not organised in such a way as to permit of its taking up the question of technological training and it is also to me a matter of some doubt as to whether the control of such training can be regarded as one of the proper functions of the department. If therefore technological facilities are regarded as necessary by the committee, they must, at any rate for the time being, be sought elsewhere.

9. There are three alternatives—

(1) To extend the Engineering College so as to provide training in technological subjects. This training will be of a University character.

(2) To build an institute similar to the Victoria Technical Institute to provide training in technical subjects. This training will be of a polytechnic character.

(3) To utilise the facilities now being provided in the Victoria Technical Institute.

10. I understand that proposals for a technological extension of the Engineering College are now under consideration. On the practical value of this scheme I am unable to give the committee any opinion as I know nothing about it. The second alternative I regard as quite out of the question. The equipment alone of an institute like the Victoria Technical Institute would cost somewhere near 10 lakhs and until it has been definitely proved that the demand for higher technical education is sufficiently great to keep an institute of this character going, I regard any experimentation as a gross waste of money.

11. The one and only objection to sending pupils to the Victoria Technical Institute is that the Madras Government is not officially connected with the institute and is therefore not in a position to work the institute into a general scheme of industrial education. This difficulty could easily be overcome by the Madras Government subscribing a certain amount annually to the institute and being represented on the council.

12. The advantages of such an arrangement are manifest. First on the score of expense it represents a large economy. If a technological institute were built in Madras most of the pupils would be drawn from the mofussil and would therefore have to maintain themselves away from home. The cost of boarding in Madras may be placed at a minimum of Rs. 12 per mensem. The cost of tuition and books will amount to Rs. 8, total Rs. 23. In Bombay the inclusive cost is Rs. 35, so that to make institutions in the two towns equally accessible from the Government financial point of view, Government would have to subscribe Rs. 15 per mensem towards the expenses of each boy proceeding to Bombay for training.

13. Assuming 12 admissions per annum, *i.e.*, 48 boys under training in a four years' course the extra expenses incurred in sending pupils to Bombay would be 48 × 12 × 15 or say Rs. 8,500 per annum.

14. Adding an annual contribution of say Rs. 30,000 towards the cost of the Victoria Technical Institute the total cost of training 48 pupils is under Rs. 40,000 per annum. To run an independent technological school will cost at least a lakh and, even if the contribution to the Victoria Technical Institute is increased ultimately to half a lakh, it will be much cheaper for Government to utilise the facilities thus offered than to start an independent institute until the admissions exceed about 60 annually.

15. A further advantage of the proposed arrangement is that the Victoria Technical Institute has now reached a point where pupils can be selected and the unsatisfactory ones eliminated. In a new institution this is not possible. On paper perhaps it may be done but in actual practice the management has to save its face and must keep up numbers at any price. The demand for higher technological training is not yet sufficiently developed in this Presidency to keep an institute filled with proper students and if an institute were started now in Madras, I am convinced that in view of the practical necessity for maintaining numbers the average value of the trained student would be very low indeed.

16. It seems to me also a desirable thing to get men away from their own surroundings. In this connection it may not be out of place to draw attention to two features of the Victoria Technical Institute which are not perhaps generally recognised. In the first place the institute is not a Government concern: it is controlled by an independent board on which Government are represented only because they subscribe towards the funds. Secondly the institute is not a local Bombay institute. Students are received from all over India, the Bombay men being indeed in the minority. The Madras Government can secure just as large a share in the control of the institute as the Bombay Government by subscribing an equal amount. Towards the maintenance of the institute the principal contributors are—

Ripon Memorial Committee.	The Bombay Government.
Sir J. J. 2nd Bart Memorial Fund.	The Bombay Millowners' Association.
The Bombay Municipality.	

17. As I have explained the Victoria Technical Institute now provides technological education for the whole of India and in my opinion it is, in the present state of industrial development, infinitely better for all local Governments to subscribe to the support of this one large institution rather than try and start small ones of their own.

18. My scheme is as follows: In the first place the Government of Madras should subscribe a sufficient amount towards the funds of the institute to secure a prescriptive right to a certain number of admissions annually. To begin with I think Rs. 25,000 is ample, no pupils from this Presidency being admitted except through the department in charge of technical education. For admission an annual examination will be held in one or more centres in the Madras Presidency, the examination being the ordinary entrance examination to the institute. These papers will then be examined and all pupils passing will be given a stipend of Rs. 15 per mensem, subject to such conditions as may be imposed. In addition there would be a certain number of scholarships of the value of Rs. 20 per mensem awarded to deserving and intelligent pupils, these scholarships, with the stipend, covering the whole of a pupil's expenses at the institute.

19. Under such an arrangement the courses of instruction in the institute and those provided under my industrial scheme would be co-ordinated, so that the institute training represented a direct extension of the industrial training in my schools and pupils qualifying under my scheme would be exempted from one or more years' training at the institute. In this way the institute would become an integral part of the Madras system of technical education until such time as the demand for technological training had proved itself sufficiently large to warrant the foundation of a local institution of the same character.

20. The following details regarding the courses of instruction at the Victoria Technical Institute may be of interest. Courses are provided in the following subjects:—Mechanical and Electrical Engineering, Weaving, Sanitary Engineering and Applied Chemistry. The courses extend over a period of four years. It was intended to try and increase this period to five: three years college and two years practical training, but the scheme fell through owing to lack of support on the part of employers of labour. No stipends are given and the fees per term (two in a year) are Rs. 25. The standard for the entrance examination is what may be termed a practical commonsense equivalent of the Matriculation standard. The Principal may at any time recommend the expulsion of any student who is not likely to profit by the training afforded.

The minimum age for admission is 16 and every candidate must hold a certificate of physical fitness and sign a declaration that he is not liable to be forced to discontinue his studies owing to financial difficulties.

21. For the first year all the courses are more or less identical, specialising more and more as time goes on. Mathematics is dropped after the first year, Physics after the second. At present the working time is 36 hours a week of which 26 hours are devoted to practice. In the near future the time is to be extended and practical work will amount to nearer 75 per cent. of the total time.

22. To obtain a certificate pupils must do at least 75 per cent. of the prescribed work and must satisfy their professors, regarding their general ability. They must also put in a period of practical training outside and complete this to the satisfaction of their employers.

23. The institute is shortly removing to more commodious premises to be erected and equipped at a cost of 13½ lakhs. This new building will provide hostel accommodation for 350 pupils with room for a further block.

III

Letter—from K. T. B. Tressler, Esq., Director of Industries.
To—the Secretary to Government, Educational Department.
Dated—Madras, the 26th February 1915.
No.—E. 44.

I have the honour to submit herewith the proceedings of the un-official committee convened to consider the proposals embodied in the draft code.

The committee approves generally the principles embodied in the Director of Industries' scheme but wishes to point out that the main difficulty hitherto connected with Industrial Education has been the lack of qualified teachers. This difficulty will continue so long as no facilities are provided for training teachers and the committee feels very strongly that in any scheme for the development of Industrial Education the very first step to be taken is the establishment of a normal training school at Madras.

The committee understands that the development of certain schools in up-country centres is contemplated by Government and would request that early steps be taken to give effect to this proposal. They consider that schools of this kind would give a valuable impetus to local industries. One member of the committee wishes to express the opinion that more should be done to investigate and develop industries.

The committee as a body also considers that much greater attention should be given to works accounting and that if possible special arrangements should be made for the teaching of the subject.

The committee also thinks that the Government workshops constitute a valuable training ground for apprentices that has not yet been exploited and submits for careful consideration the desirability of developing these workshops with a view to their becoming of educational value.

Enclosures

(i)

Proceedings of a Committee of School Managers, held on Tuesday, Wednesday and Friday, 8th, 9th and 11th September.

The committee consisted of—

President.

Mr. K. T. B. Tressler.

Secretary.

Dr. F. Marsden.

Members.

The Hon'ble Rao Bahadur Ramachandra Rao Garu.
The Hon'ble Mr. V. S. Srinivasa Sastriyar.
" " Nawab Saiyid Muhammad Bahadur.
Rev. Father J. Perrin.
M. S. D. Bawden.
Rev. C. G. Stapley.
Rev. G. N. Thomssen.
Mr. Khaja Khan Sahib Bahadur.

The Chairman described the origin of the committee and invited the views of the members upon the draft code (which had been circulated) and their assistance in revising and developing the proposed scheme.

Mr. Ramachandra Rao enquired whether this was the committee which had been promised by Government in reply to an interpellation of his in the Legislative Council, and if not whether there was any intention of a further committee being appointed. He also referred to the Proceedings of the Ootacamund Conference in 1908 and enquired whether there was any intention of starting schools of the type then recommended.

The Chairman replied that this was not the committee appointed directly by Government after the Honourable Member's interpellation; that committee would meet on the 10th and 12th of September. This committee was formed under another Government order and it was suggested that the two should work together. There was no idea of appointing any further committee.

As regards the 1908 conference, the school which was there formulated was of the higher technological type and it was not his idea to deal with that type at present but to restrict the proposals to the lower industrial type for the training of workmen and foremen.

Mr. G. N. Thomssen suggested that it would be of advantage if well equipped central Government schools could be arranged for in selected centres. These could serve as models for the schools in the surrounding districts and the Superintendent could go round supervising and inspecting. His attention was drawn to the present lack of suitable teachers and the necessity of some such scheme, as the one proposed, to meet this want was felt.

The Chairman then mentioned certain proposals which had been made with the object of improving the equipment and standard of teaching in carpentry, blacksmithy work, etc., in certain well-situated existing schools.

Mr. Ramachandra Rao wanted a number of such schools to be provided to stimulate and assist local industries; the difficulty of finding really qualified teachers was then emphasised and Mr. Bawden was of the opinion that little could be done until this was remedied, as without methodical training it was hopeless to think of raising the standard of the workman. It was due to this lack of methodical training, he thought, that the ordinary Indian workman was so deficient in the creative faculty, and possessed little or no initiative or capacity for thinking. He himself had found that, if he wanted anything at all out of the way, it was essential to undertake the training of the necessary work people himself. He thought the scheme of training outlined in Mr. Tressler's note would tend to improve the quality of the workman all round.

In a discussion dealing with the class of work to be done in the proposed practice stage, the Chairman emphasised that this was to be confined to manual training, to develop the skill which was essential for a competent workman. There was no objection to the sale of any articles produced under these conditions, so long as the idea of training remained paramount and the accounts were kept absolutely separate from those of the subsequent "workshop" stage. Other members of the committee also spoke of the value of a good system of account keeping and attention was drawn to the general inability in India to keep accounts relating to manufacturing processes.

Mr. Srinivasa Sastriyar drew attention to the paragraph dealing with the question of Superintendents in the Grant-in-Aid Code and asked why it was that European shop training was specified and whether it was necessary to exclude Indians by such a clause. Both the Chairman and Mr. Bawden explained the position, pointing out the differences which existed in the staffing of any workshop in England or Amercia and the best workshops in India. The former were filled with skilled men and the latter with unskilled, with the result that the methods followed were very different and if pupils were to receive anything like a sound training it must be through men who had themselves undergone a proper training. Of the two stages of training, that in the workshop stage was really much more important than that in the preliminary practice stage.

Mr. Ramachandra Rao enquired whether the training of Superintendents could not be undertaken in Government workshops and the Chairman thought it could if these workshops were placed under his control.

Mr. Srinivasa Sastriyar thought that the effect of the scale of grants proposed in the draft code would be to restrict the employment of highly paid teachers, but it was pointed out that this was not the case if the schools embraced both the school and workshop stages, for the more effective the teaching the greater would be the return in the later peroids of training.

Mr. Ramachandra Rao enquired whether factory schools were required to show a profit on the working to qualify for a grant and mentioned how the aluminium factory had at first worked at a loss in spite of efficient management. It was pointed out that the case of the aluminium factory was not comparable, as it dealt with a material for which a market had to be created, whereas the schools would be interested in things for which the demand already existed. The Chairman stated that although it was not absolutely necessary that schools should work at a profit to qualify for grants, it was imperative from the point of view of the training that in the workshop stage they should show evidence of a sound commercial system.

Mr. Ramachandra Rao objected to the clause under which the recognition of a school might be withdrawn because of the introduction of a *primâ facie* non-industrial pupil, but the Chairman insisted that the clause was necessary to prevent the waste which would follow from industrial schools admitting and training pupils who had no intention of following industrial pursuits but took the course with some other object in view.

Discussing the question of the amount of general education to be acquired by industrial pupils, Mr. Stapley enquired whether it would be necessary to have a separate staff, distinct from that of the ordinary school. He did not think an abridged course could be worked without it, for the Director of Public Instruction objected to the admission of half-time pupils. He saw further difficulties with respect to the variety in the educational attainments of industrial pupils of different years and thought separate teachers for these might be required. He did not think it advisable to insist on too high a standard, for his experience had been that pupils who had passed only the fourth standard took kindly to manual labour, but there was a danger that if a higher standard than this were insisted upon, the pupils would not look forward to an industrial career but would try to get other work. He thought that for a journeyman workman the fourth standard and for a foreman seventh standard should be the aim.

Mr. Ramachandra Rao enquired whether the ordinary school curriculum of general education could not be followed and wished to know what the course of general education was for industrial pupils in western countries.

Mr. Bawden said that the full curriculum in the ordinary schools was not necessary for industrial pupils here and informed Mr. Rao that in America there was no difference in the general education of different classes. After taking the same course of elementary education one pupil might become a workman whilst another would go on to study for a profession. In members of the same family one would find a wide variety of occupation and some of the best known scientific men in America had at some time earned their living by manual labour. In fact there was no dividing line between the professional man and the industrialist.

Mr. Khaja Khan Sahib Bahadur thought that reading, writing, English and arithmetic should be taught to industrial pupils and that provision similar to that in the Anjuman school, Madras, could be made.

The Chairman said he was not interested so much in the amount of education possessed by the pupil on entering the industrial school, but he thought it imperative that he should have reached a reasonable standard by the time he had completed his course, and in the case of a workman undergoing higher training, he would insist upon him getting further education by attendance at night schools.

The difficulty which might be expected in keeping the ordinary type of pupil at school until the completion of a definite course was mentioned and it was pointed out that there were no means of enforcing the fulfilment of any bond, or guarantees, which might be demanded.

In the discussion on the length of period of training Mr. G. N. Thomssen spoke of the difficulty experienced in the districts in keeping pupils in attendance throughout the year and especially during harvest.

With regard to the qualification of teachers it was suggested that selection might be made from the foreman's class and further training given, but it would be necessary to have some means of giving a suitable training and the general idea was that a central training school in Madras would be the best means of meeting the need.

A long discussion occurred with regard to the relative functions of Superintendents and Managers and the Chairman made it clear that managers were responsible for the general control of the schools but were not entitled to interfere in the question of practical training of the students, which was the province of the Superintendents.

Regarding the elimination of undesirable pupils it was not considered advisable to frame any universal scheme and the discussion drifted towards the question of the difficulty which was generally experienced in a school in getting pupils. It was stated however that as a school progressed and its value became better known this difficulty tended to disappear. It was evident from the discussion that many pupils upon whom time and money had been spent in training drifted away to non-industrial pursuits. Further, that schools varied in the treatment of their pupils; some were able to get pupils and maintain them at a minimum of cost, whilst in other the rates of stipends and the accommodation were somewhat extravagant.

The Chairman explained that his idea was to bring managers to recognise some uniform scale of stipends and to make this as low as possible. In the early stages of a school it would probably be necessary to be generous and he was prepared to recognise this and make allowance for it in the scale but if a school were efficiently managed it would soon be possible to reduce the rate to the normal level. The committee thought that, especially during the transition period, such action would be advisable.

In the discussion on grants, attention was drawn to the fact that Government had not followed the recommendation of the Ootacamund Conference to spend some 4½ lakhs per annum on industrial education. Asked to explain the system of grants proposed, the Chairman

remarked that in the school stage grants would be low, as the expenditure during this period need not be great; in the workshop stage the capitation grant was very much increased, as the cost of training was greater and it was desirable to get as many pupils as possible to go through the complete course.

The question of manual training in ordinary schools was raised and it was felt that although it was a useful subject of instruction the line of demarcation between it and industrial education should be clearly defined and the Chairman remarked that he certainly did not want the work of industrial schools to be interfered with by the introduction of a large number of manual training, non-industrial pupils.

In dealing with the question of subjects suitable for instruction and examinations, the committee requested further information as to the kind of test which it was proposed to substitute for the present Government Technical examinations. These were felt to be unsuitable and the scheme outlined by the Director of Industries was considered an improvement, if it were feasible. The Chairman explained that he did not expect to meet with any difficulty in having the tests carried out in workshops or in getting practical men to undertake the duties of examiners. He did not wish at present however to abolish the Technical examinations, as there still might be candidates desirous of taking the examinations for the sake of the certificates.

Mr. Bawden and Mr. Ramachandra Rao asked for information as to the teaching of agriculture in the schools and wished to know whether it would be possible to arrange for the purchase of land to serve the purpose of teaching. The Chairman thought so, and that if this were done, small plots might be allocated to individual pupils that they might be taught practically how to work at a profit.

There was a general expression of opinion that for the Mechanical trades the Government Workshops might with advantage be used as a training ground for industrial workers. Mr. Bawden did not see how this would be feasible, but said that one of the greatest drawbacks at present was the absence in India of commercially worked factories and workshops to which apprentices and industrial students could find ready admission.

The Chairman said he would be prepared to take over the Government Workshops and work them at a profit besides making them available as an assistance in improving the industrial education in the Presidency. He did not think they were working on commercial lines at present.

Mr. Ramachandra Rao wished to pass a resolution calling upon Government to initiate experimental work in connection with industries. He thought that more should be done in the way of investigating the prospects of new, and development of existing industries.

Mr. Srinivasa Sastri and other members thought such a resolution unnecessary and the Chairman pointed out that the Department of Industries existed for the purposes mentioned and had already done something on the lines suggested. He would refer to the matter in his report.

After some discussion a slight alteration was made on the initiative of Mr. Srinivsa Sastri, in the paragraph in the draft code dealing with the employment of teachers and it was also thought advisable to introduce a clause under which the services of teachers and superintendents who had been employed for a long term of years would not under the new system be dispensed with. It was felt that no injustice would be done if inefficient men were replaced by well qualified ones, but no definite decision was come to as to the procedure to be followed. The Chairman said he would circulate a note showing how the proposed changes affected the staff of the schools under his control.

Mr. Srinivasa Sastri and Mr. Ramachandra Rao were in favour of a permanent advisory committee being formed, but Mr Bawden did not think it would work and that it was beyond the province of this committee to suggest it to Government. The Chairman said he would refer to the matter in his report, but did not think Government would be in favour of such an idea. He would be very glad to discuss questions in a friendly way with individuals whose advice might be of value, but he did not approve of a permanent advisory committee on the lines of the one suggested for general education. Any attempt to officialise discussion of this kind would, in his opinion, defeat the end in view and any committee appointed would tend to become a dead letter.

Mr. Srinivasa Sastri thought it desirable that all schools should be thrown open to all classes of pupils. The Chairman said he would deal with the suggestion in his report.

The committee then passed the following resolutions:--

(1) Resolved that the committee approve in general of the scheme of industrial education as drafted by the Director of Industries.

(2) This committee strongly recommends that the Government of Madras arrange for the establishment at an early date of a Teachers' training school at Madras in connection with the scheme of industrial education.

(3) Resolved that the committee further recommends that Central industrial schools be established at convenient centres, as a part of the scheme of industrial education, to deal with local industries as set out in the resolutions of the Ootacamund Conference in September 1908.

(4) Resolved that in the view of this committee the present technical examinations do not serve as a satisfactory test of the capacity of a pupil in industrial subjects and that special examinations in such subjects, to be conducted by practical men, should be arranged for.

(5) Resolved in view of the extreme importance of cost keeping in all classes of manufacturing industry, that provision be made for training in works accountancy.

(6) As existing Government Workshops offer excellent facilities for practical training the committee suggests that these should be properly organised for industrial training without detriment to meeting the wants of existing departments of Government and that, wherever necessary, industrial schools for imparting instruction in the school stage be also provided in connection with them.

(ii)

Proceedings of the committee of school managers representing lace-making etc., held on 15th September 1914.

Present.

President.

Mr. K. T. B. Tressler.

Secretary.

Dr. F. Marsden.

Members.

Mrs. Firth.	Miss Grove.
Miss I. Forbes.	Miss A. M. Cassie.

The Chairman (in his opening speech) gave a resume of the meetings held during the previous week and explained the proposals which he had put forward.

Mrs. Firth showed the committee some samples of lace-work done by her pupils and explained that the work did not in any way interfere with that of the Friend-in-need workshops or of other industrial institutions. She imparted only elementary general education to her pupils, as their object was to earn their livelihood by becoming nurses, with a knowledge of lace-making. Her pupils worked for not less than 16 hours a week. She showed samples of hand worked garments which although requiring much detail work, and therefore somewhat costly, had met with a ready sale in England.

Miss Grove expressed the difficulty in making gosha Muhammadan women attend school. They had to be taken to school in a bandy and the charges in connection with this had to be met from the school funds. She had a workshop attached to her school.

Miss Cassie said that her pupils were taught lace-making for two hours a day and drawing for two hours a week. She desired to be enlightened with regard to the fixing of grants.

The Chairman expressed his difficulty in dealing with schools teaching for two hours and three hours a week and explained his proposal to draw a sharp line of demarcation between manual training and industrial work. He further explained (1) his proposal regarding half-timers and full-timers, (2) the school section and the factory section, comparing lace schools with the carpentry schools, and (3) the method of assessing grants. He observed that the articles made in lace-schools were not priced on a commercial basis, *i.e.*, with reference to the cost of raw material and the time taken up in the manufacture, and that they were not made in sufficiently large quantities. He pointed out the desirability of making such articles as would find a ready sale instead of wasting time in the manufacture of articles for which there was little or no demand.

Miss Forbes thought that the schools which made too much profit would get correspondingly less grant.

Dr. Marsden pointed out that the fact that the school made too much profit was a sign of its efficient working and it might be that such a school would get more grant.

It was resolved to include in the syllabus the following subjects :—

Needle-work and Dress-making.	Lace-making and fancy needle-work.
White and coloured embroidery.	Domestic Economy.

The Chairman thought it would be advisable at present only to give evening lectures in domestic economy in lace-schools.

The members of the sub-committee for framing syllabuses were nominated.

Dr. Marsden read the resolutions passed by the other committee and they met with the approval of this committee.

The committee then dispersed.

Order—No. 164, Home (Education), dated 13th February 1917.

Recorded.

(True Extract)

E. A. Harvey,
Acting Secretary to Government.

To the Officer in charge of the Department of Industries.

NOTES CONNECTED WITH G.O. No. 164, HOME (EDUCATION), DATED 13TH FEBRUARY 1917

[SUBJECT.—*Code of Regulations for Industrial Schools.*]

From the Director of Industries, dated 26th February 1915, *No. E.* 44 (*three letters*).

About the beginning of the year 1912, Mr. Tressler submitted a note dealing with the general policy to be pursued in regard to recognition and aid and other matters connected with industrial and technical schools. The Government passed no orders on it till the year 1914 pending the final orders of the Secretary of State on the question of the reconstitution of the department which had been then under consideration. Orders sanctioning the reorganization of the department were issued in March 1914; and the Government in G.O. No. 833, Educational, dated the 16th July 1914, directed Mr. Tressler to refer his note on industrial schools to a committee of school managers, and also to one of representative employers of labour, which was constituted in G.O. No. 780, Educational, dated the 4th July 1914, to work out details in connection with the North Madras Technical Institute. Mr. Tressler was also asked to submit a draft Code for industrial schools. He now submits the Code as well as copies of the proceedings of the committees and their resolutions. These are mainly dealt with in the second of Mr. Tressler's letters read above. His other letters relating to Madras Trades Schools (item 3 in paragraph 12 of the first letter), Endowment of the Victoria Jubilee Technical Institute [item 5 (*a*)], and Normal Training School [item 5 (*b*)] are dealt with separately, the present file confining itself only to the Code. The communications regarding Waltair, Tindivanam and Coimbatore schools (items 6 to 8) have not yet been received from the Director.

Page 2 of G.O. 833, Educational, 16th July 1914.

Page 8 of notes to G.O. ibid.

G.O. 892, Revenue, 21st March 1914.

P.R.—4-7-15.

2. As regards the draft Code, the committees in general approve of it and Mr. Tressler has embodied in it as far as possible the suggestions of the committees. The Code itself consists of two volumes, the first containing the rules and appendices, the second detailed syllabuses relating to each subject. The rules in the first volume are arranged in three parts as follows :—

P.R.—4-7-15.

PART I.—General scheme of education.
PART II.—Conditions for State aid to private institutions.
PART III.—Examinations, certificates and courses.

3. The main features of the scheme of industrial education as laid down in the draft Code are briefly described below :—

Technical education is defined as that particular type of special education which has for its object the training of industrially efficient workers. This education is divided into two kinds according to the class of industrial workmen who are trained.

Paragraph 1, page 1 of the Code.

The education given to those who *direct* the work, where theory is of paramount importance, is called "technological" education and that given to those who *actually perform* the work, where theory is subordinated to practice, is called "industrial" education. Under the former head, again, there are two types—higher and lower—called respectively the "university" and "polytechnic." The "university" type of education qualifies a man for the highest position in industry and is expected to be provided in this Presidency by the Engineering College when it is developed, the Department of Industries not concerning itself at present with it. Under the other type, viz., "polytechnic," the general education is lower and the man turned out is qualified only for lower administrative positions. It is not proposed at present to establish any polytechnic institute in this Presidency except in regard to two subjects, dyeing and leather trade, and for the other subjects under this system it is proposed to grant stipends to certain selected pupils to proceed to Bombay and undergo a course of instruction in the Victoria Technical Institute.

Paragraphs 3 and 4, pages 1 and 2 of the Code.

Paragraph 6, page 2 of the Code.

Paragraph 12, page 3 of the Code.

Paragraph 11, page 3 of the Code.

Paragraph 13, page 3 of the Code.

The other kind of technical education, which is called "*industrial*," is the one to which the Department of Industries is to devote its attention *for the present*. Under this head, there are two kinds of training, one in which the practical side of the trade alone is taught and the other where to this training some theoretical knowledge dealing with general principles is added and accordingly demands of the candidate some higher general education. The Code designates these two kinds of training as the "journeyman's" and "craftsman's" courses respectively, and the products are intended to be qualified as artizans and foremen respectively. The classification of the various types above referred to is shown in one view in the following statement :—

Paragraph 11, page 3 of the Code.

This is the policy which underlies the whole Code.

P.R.—4-7-15.

Paragraph 22, page 6 of the Code.

Technical education.

Technological (managers)		Industrial (workmen)	
University (higher class)	Polytechnic (lower class)	Master craftsman (foremen)	Journeyman (artizans)

Rightly so—in accordance with the policy of the department.

P.R.—4-7-15.

4. The Code deals mainly with the second or industrial side in the above table. It prescribes how these workmen should be trained. Both the classes above have in common practical training, which fall under two stages—the "practice" stage and the "workshop" stage, the latter of which is intended to give training on commercial lines and in addition the craftsman receives instruction in the theory of the trade also. The general educational qualifications prescribed for admission to the journeyman's and craftsman's courses are the fourth standard and the fourth form, respectively, and where the candidates have not previously acquired these qualifications, they can acquire it in the industrial school itself while undergoing the practical training. The Code recognizes two systems—one, the school system and the other, the apprentice system. While under the former, regular practical training is provided in the school itself, under the latter (apprentice system) training under an employer is taken as a substitute for it. Under the school system the total period of practical training is generally five years (two years in the practice stage and three years in the workshop stage) for both the journeyman's and craftsman's courses, and in the case of the latter an additional two years for theoretical training is prescribed. Under the apprentice system, which is mainly intended for the craftsman's course only, a workshop training under an employer for four years is laid down, exclusive of the two years' theoretical course. After two years of practice stage, an industrial school leaving certificate is granted, which will secure the candidate admission to the workshop stage and at the end of three years' training therein a journeyman's certificate is granted and after two years' further theoretical course a craftsman's certificate is given.

Paragraph 25, page 8 of the Code.

Paragraph 27, page 8 of the Code.

Paragraph 24, page 8 of the Code.

Paragraph 23, page 8 of the Code.

Paragraphs 28 and 29, pages 8 and 9 of the Code.

Schedule on pages 40 and 41 of the Code.

Pages 40 and 41 of the Code.

Paragraph 1, page 32 of the Code.

Chapter I of Part III generally.

* In the 'Practice" stage.

Provision is made for half * timers also, a longer period of training being prescribed in their case.

Paragraphs 44 and 45, pages 20 and 21 of the Code.

5. The Code divides industrial schools into two classes according as they are managed by the Government or by private bodies. The general rules in regard to recognition, organization and other matters are almost similar to those of ordinary schools. The Code also lays down rules in regard to strength and qualifications of the staff.

Paragraph 35, page 11 of the Code.

Chapter II of Part II, pages 15 to 19 of the Code.

Paragraphs 41, 60 and 61 of Part II, pages 20 and 24 of the Code.

Pages 29 to 31 of the Code.

As regards grants-in-aid, these are the same as those for ordinary schools in the case of building and furniture grants. In the case of teaching grants, however, a completely new system has been proposed, based on cost of staff and on the number of recognized pupils under training, the rates varying according to the stages of instruction and the number of subjects taught.

Page 27 of the Code.

Chapter I of Part III, page 32 of the Code.

All for good.

P.R.—4-7-15.

As regards examinations, it is proposed to break away completely from the present Government Technical Examinations. Examinations are to be held at the end of the practice, workshop and craftsman's courses and certificates granted. The first of these will be held by the school authorities. The other two will be held by a body of examiners nominated by an examination committee and approved by the Government.

Chapter II of Part III, page 34 of the Code.

The Code provides for the payment of scholarships on the results of annual examinations in the several stages of the course.

Besides the regular and complete courses of training described above, the Code also provides for other kinds of special classes where instruction in theory or practice of varying nature will be imparted to such artizans or other people who cannot avail themselves of the advantages offered by the regular course. These special classes are of five kinds—

Chapter IV of Part III, page 42 of the Code.

(1) Popular lectures.
(2) Trade instruction classes
(3) Extension classes
(4) High Proficiency classes.
(5) Theoretical classes.

Lastly, the Code lays down regulations for the normal training of industrial instructors. These are to receive stipends as are allowed to ordinary teachers undergoing training.

Chapter V of Part III, page 44 of the Code.

6. It will be seen from the above that the proposals made in the draft Code are mainly developments of the scheme outlined in Mr. Tressler's original note of 1912. Broadly speaking the scheme laid down in the Code does not seem to be open to any serious objection and it has had the approval of a large body of technical men.

Pages 2 to 20 of G.O. 833, Educational, 16th July 1914.

I quite agree.

P.R.—4-7-15.

7. As regards the Code itself, it is submitted that it is intended to cover, so far as industrial schools are concerned, the grounds covered by the Madras Educational Rules and the Grant-in-aid Code as regards ordinary educational institutions. The former contains all the regulations for the organization, working and recognition of schools; while the latter lays down the nature and conditions of aid to be given to the various kinds of schools and colleges. Both these are combined in the draft Code for Industrial Schools. Parts I and III of this are special to industrial education—the former gives only the definition and classification of such education, and the latter rules relating to examinations, scholarships, etc. Part II contains provisions similar to those in the Educational Rules and the Grant-in-Aid Code.

I see no harm in it.

P.R.—4-7-15.

It is respectfully submitted that Part I seems unnecessarily elaborate and contains matters which do not ordinarily find place in any Code. It is replete with much of disquisitional matter and specification of the obligations of Government which would be more fit for a "report" than a Code. The functions of a Code are generally to lay down rules and regulations for the organisation and working of institutions; the reasons which lead to the framing of such rules should not find a place in it. Further in this part some references to schemes which have not yet been considered by the Government are made, e.g., the permanent institution of scholarships at the Victoria Technical Institute, Bombay, and the acquisition of interest in that institute by the Government, the development of the Engineering College into a Technological Institute, the monopoly of the Government to establish training schools, etc. These will have to be expunged from the Code. These matters will be further referred to below when dealing with the individual paragraphs of the Code.

E.g., paragraph 10, page 3, paragragh 28, pages 8 and 9, paragraph 33, page 10 of the Code.

The whole thing is tentative; and the department has to carry the public with it; some prolixity is not harmful just now.

P.R.—4-7-15.

Paragraph 13, page 3 of the Code.

Paragraph 12, page 3 of the Code.

Last sentence of paragraph 10, page 3 of the Code.

I am by no means certain that all these things should be expunged.

P.R.—4-7-15.

Though *Part II* is not open to such criticism, the arrangement of the matter therein leaves much to be desired; questions relating to recognition and grant and to disciplinary regulations are largely mixed up. These will also be pointed out in detail below.

P.R.—4-7-15.

Part III is, however, generally acceptable.

P.R.—4-7-15.

The various paragraphs in the Code will now be dealt with separately *.

S.K.—15-6-15.

C.R.—20-6-15.

* Printed as annexure.

Extract from His Excellency's Note on the files relating to the Department of Industries.

* * * * * *

6. In regard to the Code, I should first like to know the extent of the field which it will regulate; how many schools, teachers and pupils will at present come under this Code? I ask this because I greatly doubt whether there is a sufficient body of accepted theory and practice in industrial education to justify our committing ourselves at present to so comprehensive and elaborated a system. We should, I agree, work up to something of the kind, but experience during the intervening period may substantially modify present opinions as well as future requirements. Also a Code, as I understand it, should simply be a body of regulations. I would omit so far as possible from it everything in the nature of a declaration of policy or a manifesto on the subject; all this might, I suggest, conveniently find place in a separate explanatory memorandum. Also there should be omitted, as I have already observed in the administration report of this department, every reference to Mr. Tressler's proposals which has not yet received the approval of Government. As an illustration of this I may mention the references to the Victoria Technical Institute, Bombay. If I remember aright, there are other instances. It would be perfectly possible thus for Mr. Tressler to remove from the Code all explanatory and descriptive matter and reduce it considerably in size.

A

B

7. There are several points of detail which require, I think, further consideration, such as whether or not fees are to be paid in industrial schools. This and possibly others are based upon the recommendations of the committee; but I think it is of sufficient importance, and there may be others of the same kind, to deserve further consideration than it has received. Such points should be further noted upon.

C

8. In regard to teaching grants, so far as I can see, though I have not been able to examine the matter as closely perhaps as it should be examined, there is no reference to the share of expenses to be provided by the manager. Does it follow that with the 3/10ths salary grant and the capitation grant any particular institution will be able to pay its way? Have the scales proposed been worked out with the budget figures of existing schools? If grants are to effect the maximum amount of good, they should be as far as possible permanently fixed from year to year so that schools may rely upon them; and here again I doubt whether we are ripe for a rigid system and whether it would not be better to call for a budget from each school and within limits laid down assess grant according to its requirements.

D

9. Again, in regard to building grants, these paragraphs are taken, I assume, mostly from the existing Grant-in-Aid Code and based on some experience. I am not convinced that it is desirable, except where absolutely necessary, to depart from those existing provisions which after all are based upon experience. Even as a matter of convenience there is a strong case for the building and furniture grant provisions being identical in the two Codes. Indeed there is something to be said for this Code merely stating that the provisions of the Grant-in-Aid Code will be applied, and printing them as an appendix for convenience of reference.

E

10. When the information for which I have asked above is forthcoming, I shall be prepared to discuss with you or with Mr. Tressler any of these points before passing final orders upon them.

P[ENTLAND]—24-9-15.

A The number of schools under the control of the Director is 40 and their strength on the 31st March 1915 was 1,876. The number of teachers in those schools is not known. Information in this regard has been called for in connection with the proposal to establish a normal training school.

B The notes already submitted by the office on the Code follow the lines laid down by His Excellency. The notes have been further scrutinized and, wherever necessary, additional notes have been added under each paragraph.

C Specific questions regarding fees and other matters have also been dealt with in the respective places in the notes.

D With reference to the verbal orders of the Secretary that the system of teaching grants should be as elastic as possible, notes have been added in this regard under paragraphs 73-76 of Part II. It is proposed therein that grants should be fixed by the Director in each case with reference to the circumstances of the school and after scrutiny of the budget estimates for the year subject to the limitation of half the net cost.

E The rules of the ordinary Grant-in-Aid Code in regard to building grants have been adopted in the draft Code without any material alteration. They have been incorporated in the body of the Code itself as in a few respects slight modifications are necessary to adapt them for industrial schools. In general outline and in most of the details the rules are the same. For the reasons stated above, it may be better to bring them in the body of the Code than as an appendix.

The reply to the reference made to the Director of Public Instruction in regard to general education in industrial schools having since been received, the notes relating thereto have been added along with those under paragraph 24 of Part I and further notes added.

S.K.—10-10-15.

C.R.—11-10-15.

On 5th November 1915 His Excellency the Governor approved of the despatch to the Director of Industries u.o. for acceptance or criticism of a revised draft of volume I of the Code drawn up on the above lines.

C. G. TODHUNTER—5-11-15.

U.O. Note to the Director of Industries.

On the result of a further examination of the draft Code of Regulations for Technical Education, Government are disposed to doubt whether there is a sufficient body of accepted theory or practice in industrial education to justify their committing themselves to so comprehensive and elaborate a system. They therefore desire that the Code should be reduced for the present to what is essential for present necessities, to be elaborated later as experience dictates. To this end they wish to have removed from it the following matter :—

(1) Everything of the nature of a declaration of policy as distinguished from the regulations which are proper to a Code.

(2) Every reference to proposals which have not yet received the approval of Government.

(3) All explanatory or descriptive matter that is not essential to an understanding of the context.

Where the Code follows the Grant-in-Aid Code or the Madras Educational Rules it is desirable that it should do so, so far as possible, *verbatim*. The rules contained in these publications have stood the test of experience or have been modified as experience showed necessity. Further modifications are not improbable and recognized interpretations have grown up. It is undesirable that there should be two parallel Government Codes with slight differences in wording. Some other matter which is not essential to the Code, e.g., the reference to special courses, may for the present be left for separate treatment.

In some minor matters it seems doubtful whether it is at present wise to adopt the scheme set forth in the Code in its entirety. Instances are the proposals relating to half-timers and the High Proficiency examination. It seems desirable to omit these for the present, meanwhile giving the Director what latitude is possible.

A revised draft of the first part of the Code prepared in accordance with these orders is herewith forwarded to the Director who is requested to examine it at his very early convenience and to return it with his remarks. Thereafter he is requested to suggest such changes as may be necessary in the forms in volume I and in volume II of the Code.

C. G. TODHUNTER—5-11-15.

OFFICE OF THE DIRECTOR OF INDUSTRIES.

The amended Code returned herewith together with—

(*a*) notes by Government,
(*b*) re-amended Code (as re-amended by me),
(*c*) notes by me on my re-amendations.

K. T. B. TRESSLER—17-4-16.

EDUCATIONAL DEPARTMENT.

Please see His Excellency the Governor's note on pages 5 supra. A revised draft of the Technical Education Code was prepared in accordance with His Excellency's instructions and was forwarded to the Director of Industries for remarks. The Director does not see his way to accept the revised draft. On the other hand he has prepared a slightly amended draft of his original Code embodying a few of the minor alterations suggested by the Government. But there are still several important points on which he has departed from the principles laid down by the Government. The following are some of these :—

(1) In chapter 1 of Part I of the Code all explanatory and descriptive matter was omitted but the Director proposes to retain some of it still.

(2) In chapter 2 of Part I the rules relating to the Bombay Victoria Technical Institute scholarship scheme were collected separately and added to the end of the chapter. The Director has again, however, mixed up those rules with the rules for the technological courses in dyeing and leather trade provided for in this Presidency.

(3) Chapter 4 of Part I which deals with the classification of trade and industrial schools was omitted as such classification was considered to be unnecessary at present. Mr. Tressler, however, states that the chapter is necessary and must be retained.

(4) In Part II a re-arrangement of chapters was made so as to bring all rules relating to grants together and to group separately chapters containing general rules regarding organization, etc., of the nature of those found in the Madras Educational Rules. Mr. Tressler finds himself absolutely unable to agree to this rearrangement.

(5) It was proposed to leave out for the present all references to half-time courses, special classes, normal training and the new scheme of scholarships. Mr. Tressler desires to retain all these from the outset. It has been decided that his scheme of normal training cannot be adopted now—please see G.O. No. 234, Educational, dated the 3rd March 1916. His scheme of scholarships is entirely different from what is followed at present. It has not yet been considered and sanctioned by the Government. It was therefore proposed to deal with it separately.

(6) As regards building and furniture grants Mr. Tressler in his original draft embodied the rules in the Grant-in-Aid Code without carrying out the recent amendments that had been made in that code by the Government. In the revised draft of the code prepared by the Government all these amendments were embodied. In the amended draft now forwarded by him Mr. Tressler sticks to his original rules without the alterations.

2. Mr. Tressler states that he is unable to accept all the changes and alterations proposed by the Government and that if such alterations should still be made it should be done by the Government irrespective of the views of their technical adviser. In these circumstances orders are solicited whether each section of the modified code submitted by Mr. Tressler should be examined in detail. We have now three drafts of the code—Mr. Tressler's original one, the one suggested by the Government, and Mr. Tressler's revised one. Mr. Tressler mostly sticks to his

guns and is unwilling to enter into further discussion about the various questions raised in connection with the code. The notes having already reached a voluminous size, further noting on details may tend to confusion. It may probably be better to defer action until Mr. Couchman takes charge and becomes conversant with the general position of technical education in the Presidency.

S.K.—3-5-16.

C. RAMANUJA ACHARIYAR—3-5-16.

It would be waste of time to argue the matter further with Mr. Tressler. I would allow Mr. Couchman to take charge and make himself conversant with the work of the department and the final form of the Code can be settled with his help.

P. RAJAGOPALA ACHARIYAR—4-5-16.

P[ENTLAND]—5-5-16.

File regarding Technical Education Code.

In accordance with the recommendations of the Industrial Conference held at Ootacamund in 1908 all the industrial schools which were till then under the Director of Public Instruction were transferred to the charge of the Director of Industries and that officer was called upon to prepare and submit for approval his recommendations as to the constitution, the functions and the curriculum of industrial schools. A set of draft rules regulating the grant of aid to these schools was also called for. When Mr. Tressler became the Acting Director he took up the preparation of the draft rules for regulating grants-in-aid but could not proceed further for want of a definite policy in regard to industrial education. He accordingly submitted with his letter No. 68 G., dated the 28th July 1910, the outline of a policy for the approval of the Government. But no definite orders were then passed by the Government thereon, apparently because the orders of the Secretary of State abolishing the Department of Industries had in the meantime been received. By these orders the Director of Industries was replaced by a Superintendent of Industrial Education under the Director of Public Instruction. Nothing definite was done with either the policy or the formulation of the rules for sometime.

Paragraph 3 of G.O. 2894, Revenue, 17th October 1908.

G.O. 1625, Revenue, 18th June 1909.

Page 5 of G.O. 3459, Revenue, 1st November 1910.

Pages 17 and 18 of G.O. 3446, Revenue, 27th October 1910.

Mr. Tressler who succeeded Mr. Chatterton as Superintendent of Industrial Education, however, prepared a note in 1912 dealing exhaustively with the problem of industrial education, its definition, the classification of industrial schools, their curriculum, the qualifications of the staff and pupils, the conditions of recognition and aid, the examinations and the grant of certificates and scholarships. The Director of Public Instruction (Dr. Bourne) was in general accord with the main principles of the note. Though the note was examined in detail, orders thereon were deferred pending final decision of the Secretary of State who had again been addressed in regard to the reconstitution of a Department of Industries in this Presidency. In G.O. No. 892, Educational, dated the 21st March 1914, the Government sanctioned the formation of such a department, and in G.O. No. 833, Educational, dated the 16th July 1914, the Director of Industries was asked to refer his note regarding industrial education to two committees of representatives of educational interests and of employers of labour and to submit their recommendations to Government with his remarks and a draft code for industrial education. These were received in March 1915. The Technical Education Code submitted by him was examined in detail and the modifications

Pages 2 to 19 of G.O. 833, 16th July 1914.

Director of Public Instruction's covering letter on page 2 of Government Order ibid.

Page 8 of notes to G.O. ibid.

proposed therein were embodied in a revised draft prepared by the Government and the latter was sent to the Director of Industries for remarks on the 5th December 1915. The Director's reply was received on the 23rd April 1916. He finds himself unable to accept all the modifications proposed by the Government but has prepared a slightly altered draft of his original Code which he submits for the approval of the Government. There are thus at present *three* drafts of the Code—the original prepared by the Director, the revised one prepared by the Government, and the amended draft recently submitted by the Director. Further consideration of the Code has been held over pending assumption of charge by Mr. Couchman.

P.R.—30-5-16.

The development of industrial schools, schemes in respect of some of which have been before Government for some time, is being held back for want of definite orders on the policy and the absence of the Code.

S.K.—29-5-16.

C.R.—29-5-16.

Mr. Couchman may with advantage see these papers.

P. RAJAGOPALA ACHARIYAR—30-5-16.

Yes.

P[ENTLAND]—31-5-16.

Mr. Couchman u.o.

P.R.—1-6-16.

Industrial Education

I have read the draft Industrial Education Code, and I have shown it to several people in Madras, employers and educationalists. No one has a good word to say for it. It is quite out of touch with the realities, both of education and industry, and consists of a purely theoretical structure, based on no experience. The general features of it are, the division of the industrial training into two grades, that intended to produce foremen (the "craftsman's" course) and that intended to produce workmen (the "journeyman's" course). The education is to be divided into two parts, the "practice" stage and the "workshop stage." The "practice" stage is to be of two years' duration and the "workshop" stage of three years' duration. The aim of the practice stage is to produce "skill" in the abstract and of the workshop stage to produce knowledge of how to apply skill in practice. The technological side of the scheme of industrial education is to produce managers and upper subordinates.

The criticism of practical men such as Mr. S. Jackson, the dyeing chemist, and of the weaving master of the Buckingham Mills, is that there is nothing corresponding to this scheme in the English system of education as known to them. No one has ever heard of any proposal to produce different kinds of industrialists by giving different kinds of education, apparently in the way in which bees produce different classes of bees by feeding them on different kinds of food. They say that foremen and also works-managers themselves, in many cases, are men who have had the same education as workmen, and have risen from the ranks by proving their worth in the mill, and by taking advantage of evening classes to make themselves masters of their business. It is only when the manager is the son or relative of the owner or of one of the partners in the business that he is a man of University education. Men who have had a University education, or even a special whole-time course in any trade, are looked upon with suspicion by practical men, the ground of this suspicion being that they acquire dilettante and amateurish ways of looking at problems. The man who gets on is the man who has educated himself while actually working at the trade. I may mention that in several conversations on the same subject with Sir Thomas Holland (though I did not show him the draft Code, nor consult him specifically on it) he expressed most emphatic opinions to the same effect. As he is a professor at the Manchester University, the greatest industrial centre in England, perhaps in the world, his opinions carry special weight. He says that University

education, specially of a technological kind, is becoming more and more discredited every day, as the men turned out by it are utterly distrusted by practical business men. To succeed in industry, apparently, a young man must be all along from about the age of 14, in the closest touch with the trade, and, at most, gain his theoretical knowledge while working as a half-timer. This does not, of course, apply to specialists like chemists, who must have a whole-time course in pure science.

If this is the case with managers, how much more will it apply to foremen and workmen? The scheme contemplated in the draft Code of making workmen and foremen by an artificial training stands condemned in the light of modern experience. In the practice stage in Mr Tressler's scheme boys are, as far as I can gather, to be restricted to formal exercises, i.e., they are to make joints, to cut wood or metal into various shapes, to learn the use of various tools. They are not to make any actual articles. This is exactly what is now condemned by the advocates of "manual training" which is such a vigorous and successful development of English elementary education. It destroys all the interest which the children might otherwise take in their lessons and thereby the lessons lose the greater part of their educational value.

"Industry is everywhere and always for the sake of the product, and to cut loose from this as if it were a contamination is a fatal mistake. To focus on process only, with no reference to the object made, is an almost tragic case of the sacrifice of content to form, which in all history has been the chief stigma of degeneration in education. Man is a tool-using animal, but tools are always only a means to an end, the latter prompting even their invention. Hence a course in tool manipulation only, with persistent refusal to consider the product lest features of trade schools be introduced, has made most of all manual training high schools (in America) ghastly, hollow, artificial institutions." (Stanley Hall, quoted in "the Thinking Hand," page 5, by J. C. Legge, Director of Education in the city of Liverpool.)

After the two years of the practice stage the boys are to have three years training in an artificial workshop to be established near the practice school. This workshop is to be on business lines, and when they are in it the pupils are to be made to earn their living. I find it extremely difficult to make out what financial assistance Mr. Tressler proposes to give to the workshop stage of the school. I may say that I should be sorry for the managers of the schools if they were required to understand the Code in its present form with all its recapitulations and redundancies, its bad arrangement, and intermixture of different subjects.

My chief objection to the proposed workshops, however, is that they would not be genuine commercial workshops, and there is every probability that they would not pay their way. The various bodies who manage the present industrial schools now have a free hand in the manner in which they employ their boys. Even small boys can do some productive work, and thus help the finances of the school. Under the new scheme no one is to be admitted to the workshop till after at least two years in the practice stage, in which no commercial work is to be done. But if the workshop does not pay, the scheme falls through. The manager of the Karur school, one of the most successful of the industrial schools, told me plainly that, if the Code was enforced, he would have to close his school altogether, as the separation of the school and the workshop would cost him more than he could afford. This separation is, moreover, opposed to the traditional way in which workmen are trained in all countries in the world. They learn the elements of their trade by helping their parents. It is true that under the modern industrial system in Europe this is not possible in many trades, and this is one of the motives underlying the movement for "manual training" in modern European education.

'The sense of the loss of the old home sides of education has deepened as 'people have realized more and more how difficult it is under modern conditions 'for even a good home to discharge fully the duties of a home. We want to 'introduce into the school more of the atmosphere of life as it is lived, to give the 'scholar more of the environment of life; for it is atmosphere and environment far 'more than direct instruction that give character.' ("The Thinking Hand" page 10.)

The practice stage contemplated in the draft Code would separate the boys entirely from life, confining them to unreal formal exercises. The true training to be aimed at is that which would resemble as closely the old home system, by which the boy watched his father at work, and gradually picked up his trade while helping him.

The scheme, therefore, stands condemned by the latest theories of education (which are really an attempt to revert to the old home system of training) and by experienced industrialists. I would drop it altogether.

Although my ideas on the subject of what should be done with the industrial schools are still rather vague, I am putting them down now, as I may not have a further opportunity.

I feel that Mr. Tressler was right in thinking that there is a need for a definite policy for the industrial schools, and that they are not satisfactory at present, inasmuch as they present rather social "rescue" work than education. Many poor boys are taught a useful method of earning their living, and many good workmen are turned out with a better knowledge of their trades than they would have got elsewhere. I have not had time to visit the schools yet, so I cannot say what they are doing besides this. I am, therefore, trying to arrange with the Director of Public Instruction for Mr. Fyfe, the new instructor in manual training, to be made available for the inspection of all the industrial schools, and I have hopes that he will give his consent. After Mr. Fyfe has inspected all the schools, I propose to get him to prepare a general report on the industrial schools, from which we could settle the question of what should be our general policy in regard to them. I feel that a retrograde step was taken when they were made over to the Industrial Department. They are not industrial schools in the sense that they fill any felt want in the industrial system. An industrial school can only serve an industrial purpose when situated right alongside a real commercial factory. Its true function is to offer to working artizans a means of improving themselves so as to qualify themselves for higher positions. I would retain under the Industrial Department only night schools or half-time schools, admittance to which should be restricted to working artizans, and the teachers in which should be practical working foremen. I am at the present time arranging to start two such schools for plumbers and mechanics in the town of Madras. I feel that most of the present industrial schools should be developed into manual training centres, which should be open to all the boys attending the ordinary elementary schools in the neighbourhood. I look forward to the most valuable results from the recent development of this branch of education by the Educational Department. Two trained European instructors have been got out and are now being employed in teaching manual training partly to the European schools and partly to Indian teachers. As soon as teachers are available, the strongest pressure should be brought to bear on all local bodies to introduce this most valuable element into all their elementary and secondary schools, and liberal help given by the Government to provide them with the apparatus, and to enable them to meet the cost of such courses, which would be of even greater educational value here than in Europe, to mitigate the strong tendency in Indian education to confine itself to book work. In other words, the correct function of the industrial schools should be purely educational, for the value of manual training is not that it prepares boys to become carpenters or blacksmiths but that it is a part of the development of the faculties.

"The essence of preparatory training for manual work does not lie in introducing into our manual training courses tools, machines and materials that belong to a definite profession. The essential thing is to form and practise those organs, mental and physical, which are necessary for the vocation, to form habits of honest work, of carefulness, of thoroughness, and of foresight, and lastly to awaken a real joy in work. If any one gains these qualities in any kind of systematic work (e.g., woodwork) then he possesses and uses them in any kind of manual work which his vocation later may call for page 6."

To sum up, I propose that no change should be made in the present industrial schools till Mr. Fyfe has carefully inspected them and reported what work they are doing now, and what use could be made of them in the educational system. I anticipate that it will be found that they should be replaced under the management

of the Director of Public Instruction and that they will be developed into manual training centres for the use of the boys of all the schools in their neighbourhood. The Industrial Department should have nothing to do with education as such. It should, however, develop the system of night schools or part-time schools for working artizans, and these should be opened in places where, owing to the existence of industries already, there are a sufficient number of artizans to benefit by them.

M. E. COUCHMAN—18-9-16.

HOME (EDUCATION) DEPARTMENT.

Please see Mr. Couchman's note above. He considers that Mr. Tressler's Technical Education Code is faulty in many respects and is not in favour of its adoption without further examination. He accordingly proposes to ask Mr. Fyfe, the Manual Training Instructor for European Schools in the Educational Department, to inspect the industrial schools in the Presidency and to report on them, and then to consider what policy should be followed in regard to these schools. He advises that in the meanwhile no change need be made in the present position of these schools. The question of entrusting to Mr. Fyfe the duties of Inspector of Industrial Schools is now under separate consideration. Mr. Couchman has promised to submit formal proposals * in consultation with the Director of Public Instruction. It is for orders whether in the circumstances this file may lie over for the present.

May be approved.
E.A.H.—14-10-16.

E.A.H.—14-10-16.

* Proposals approved in G.O. 1221, 21st November 1916.

It may be noted here that the question of developing selected aided industrial schools, such as those at Vizagapatam and Tanjore, with special State aid is lying over pending settlement of a definite policy in regard to industrial schools generally. Apparently the question can be taken up only after Mr. Fyfe's report is received.

S.K.—26-9-16.
N.K.—7-10-16.

E. A. HARVEY—14-10-16.

Print up the file sharp and resubmit.

P. RAJAGOPALA ACHARIYAR—18-10-16.

The notes have been printed and the file is submitted.

S.K.—30-10-16.
N.K.—1-11-16.

E.A.H.—4-11-16

May I send these papers to Mr. Innes u.o.

P.R.—7-11-16.
P[ENILAND]—11-11-16.

To Mr. Innes for perusal of the note and current files and remarks, if any, he may wish to make.

There is no urgency at all and Mr. Innes may take his own time over it.

P.R.—12-11-16.

OFFICE OF THE DIRECTOR OF INDUSTRIES.

I have taken advantage of the Christmas holidays to study this file, and I agree with Mr. Couchman that Mr. Tressler's draft Code should be rejected. It represents a good deal of thought in respect of what is an extremely difficult problem, but the general opinion appears to be that it is far more likely to retard than advance industrial education.

2. I have had several conversations with Mr. Fyfe on the subject of industrial and technical education, and the latter has already fairly definite views as to the lines on which we ought to work. But I am not prepared at present to suggest any cut and dried scheme to Government.

3. As regards existing aided industrial schools, I agree with Mr. Couchman that Mr. Fyfe should be given time carefully to inspect all the existing schools and that we should wait till we get his report before we attempt to decide what policy to adopt in respect of them.

4. The only other clear idea I have is that in any scheme of industrial or technical education we may formulate we must endeavour to enlist the co-operation of such factories and workshops as exist in the Presidency. This was Mr. Chatterton's idea when he proposed his scheme of State apprenticeships and of a school where the apprentices would receive such elementary technical instruction as their education would permit them to assimilate. The ultimate result of this scheme has been that the idea of State apprenticeships has been dropped for the time being and that experimentally we have made a beginning with classes for apprentices and workmen in plumbing and mechanical engineering in a rented school building. It is a modest beginning no doubt, but it is a beginning on the right lines, and if the classes are a success, I hope to start others on the same lines. Mr. Fyfe and I are already discussing possibilities in this direction for the two classes which have been opened have made a very promising start.

G.O. 1092, 17th October 1916.

5. My own feeling is that we must be content with a very humble beginning in the matter of industrial and technical education in Madras, and that for a time we must be content more or less to grope our way. For we must recognize that the possibilities are limited. The country is essentially an agricultural one. We have no coal and fuel is dear. There is no possibility therefore at present of cheap power, and this being so, we can never hope to make the Presidency an industrial country. Barring a few railway and Public Works Department workshops and a few cotton mills, there are no shops where apprentices can be trained, and there are few openings for the men when trained. Mr. Tressler recognises these limitations clearly enough in paragraph 29 of his draft code. But instead of accepting them, he tried to get past them by an admittedly artificial system of industrial education. He was too impatient. What I think we ought to do first is to get into touch with those in charge of the railway workshops and the factory owners. Some of them are already working at the problem in their own way. Apprentices are admitted to the railway workshops, and in some places (Negapatam for one) schools exist in connection with the workshops. The Buckingham Mills have their own night school, and the Manager of the Coimbatore Mills has already offered to take in a limited number of Anglo-Indian apprentices with the idea of training them partly in the mill and partly in continuation classes. Perhaps we can help them in their schemes. At any rate we can learn and perhaps make use of their ideas, we can find out what class of men they want, what posts are open to those men and what are the chief difficulties at present—whether in the general education of the men they now get or whether in the lack of facilities for theoretical teaching to supplement the practical training in the workshop or mill. There is no need to summon any more Committees at present. It is a matter for enquiry by Mr. Fyfe and myself. We ought to be able to get sufficient information to enable us to grasp exactly what the problem is. Then it will be time to consider how best to solve it.

6. Probably however continuation classes or night schools established in connection with railway workshops or factories will not cover the whole ground. There is a fairly large demand I think for mechanics for water works, for rice mills and for pumping installations. The Madura Technical Institute and such institutions as the Chengalvaroya Naicker's school and the Anjuman do something to meet this demand. But probably the supply does not meet the demand and more Government schools on the lines of the Mechanical Engineering Section of the Madura Technical Institute may be found necessary. This is also a matter for enquiry.

7. These are merely such provisional ideas as are at present taking shape in my mind. The main point for the moment is whether Government should spend any more time on Mr. Tressler's draft code. I think it should be discarded, and an attempt made to work out some less ambitious and more workable scheme.

C. A. INNES—8-1-17.

HOME (EDUCATION) DEPARTMENT.

Mr. Innes suggests that Mr. Tressler's Technical Education Code need not be further proceeded with. He will presumably submit proposals in due course in consultation with Mr. Fyfe for the development of industrial education in the Presidency.

G.O. 937, 26th August 1915.

2. It may be noted here that in anticipation of the issue of a separate Code for industrial schools all references to the sanctioning powers of the Director of Industries in regard to grants to those schools have been omitted from the Grant-in-Aid Code of the Educational Department. But his powers in that regard are specified in G.O. No. 1194, Educational, dated the 24th October 1914, and in practice the provisions of the Code are being followed in sanctioning grants to industrial schools—vide G.O. No. 1437, Educational, dated the 18th December 1915, and G.O. No. 280, Educational, dated the 16th March 1916. Subject to the orders in this Government Order he may be asked to follow as far as possible the general provisions of the Grant-in-Aid Code in regard to the maximum grants admissible for industrial schools and the procedure to be followed for the disbursement of the grants. A draft demi-official is submitted.

E.A.H.—30-1-17.

3. It is for orders whether these papers *may be recorded* for the present.

S.K.—24-1-17.

N.K.—29-1-17.

E. A. HARVEY—30-1-17.

His Excellency's last note is at page 12. Please see Mr. Innes' note, pages 12 and 13.

The papers may, I think, be recorded.

Draft demi-official to Mr. Innes is for approval.

P. RAJAGOPALA ACHARIYAR—1-2-17.

P[ENTLAND]—2-2-17.

Issue the demi-official and let me have draft Government Order please.

P.R.—3-2-17.

Demi-official—from E. A. HARVEY, Esq., I.C.S., Under Secretary to Government, Home (Education) Department.
To—C. A. INNES, Esq., I.C.S., Officer in charge of the Department of Industries.
Dated—the 3rd February 1917.
No.—744/15-5.

The Government agree with you that it is unnecessary to bestow further consideration on Mr. Tressler's draft Technical Education Code, and they hope that you will submit in due course, in consultation with Mr. Fyfe, fresh proposals on the subject. Till then, the provisions of the Grant-in-Aid Code may be followed as far as possible in regard to the payment of grants to Industrial schools. Your powers in this respect are laid down in G.O. No. 1194, Educational, dated the 24th October 1914.

A draft order is submitted. The current and notes are already in print. The Government Order may be printed for record.

S.K.—7-2-17.

N.K.—10-2-17.

Yes.

E.A.H.—12-2-17.

[G.O. No. 164, Home (Education), dated the 13th February 1917.]

ANNEXURE

PART I

General Scheme of Education.

CHAPTER I.—DEFINITIONS.

"TECHNICAL education is that particular type of 'Special education' which "has for its object the training of industrially efficient workers. Its value is accord- "ingly to be judged, not by an academic, but purely by a practical industrial "standard."

Office Note.

8. The definition of technical education seems to be comprehensive enough and may be approved. In his original note, however, Mr. Tressler relegated the term "technical education" to that superior type, which under the present Code is termed 'technological"; but now "technical education" is taken as a general term to denote both the higher and lower types. The terminology has been accepted by the committee; and there seems to be no objection to it. It may perhaps be better to omit the second sentence in this paragraph or replace it by a clause something like this—

Page 3 of G.O. 833, Educational, 16th July 1914.

P.R.—4-7-15.

"and its value is to be judged by a practical industrial standard."

Secretary's Note.

I would retain Mr. Tressler's wording which is forcible and desirably so.

P. RAJAGOPALA ACHARIYAR—4-7-15.

May be accepted.

C. G. TODHUNTER—13-10-15.

"2. In some respects instruction of a technical character may be regarded "as of sufficient general value to warrant its inclusion (in a partial form) in a gene- "ral educational course. But inasmuch as the object of the teaching will not then "be industrial, instruction thus provided cannot be regarded as technical and may "be termed manual training. The object of the training being fundamentally "different in the two cases, technical education and manual training must be "treated as entirely different types of education which it is impossible to combine."

Office Note.

9. Mr. Tressler would class as "manual training" all kinds of instruction which are not strictly "technical" according to his definition. It is, however, submitted that there are other types of education such as typewriting, shorthand, telegraphy, etc., which had hitherto loosely been termed "technical education" and which will not fall under "manual training." Please compare paragraph 3 (1) of the letter to the Government of India, No. 3852, Revenue, dated the 30th December 1912. Thus all technical education which is not of industrial nature need not necessarily be manual training. It is therefore submitted that it would be better if reference to the latter is omitted altogether. If this is approved, the words "and may be termed manual training" and the sentence succeeding it may be deleted; and the words "within the cognizance of this Code" may be added after the words "cannot be regarded as technical".

Mr. Tressler does not say that.

P.R.—4-7-15.

Very loosely.

P.R.—4-7-15.

Secretary's Note.

I would make no change.

P. Rajagopala Achariyar—4–7–15.

Further Office Note.

In view of His Excellency's note on page 5 *supra*, under which all explanatory and descriptive matter will have to be removed from the Code, the whole of this paragraph may perhaps be omitted.

C.R.—11–10–15.

I think this may be omitted. Manual training is a special branch of education in itself and need not be brought into this Code.

C. G. Todhunter—13–10–15.

"3. Industrial workers are broadly divisible into two classes —
"(1) Those who direct the work ;
"(2) Those who actually perform the work ;
"and technical education may be divided into two corresponding classes, the training "of the first class of worker being termed *technological* and that of the second "*industrial* education."

Office Note.

10. In its first resolution the committee of representative employers accept this classification and it may be approved by the Government.

P.R.—4–7–15.

S.K.—15–6–15.

C.R.—20–6–15.

May stand.

C.G.T.—13–10–15.

"4. To a preliminary course of general education, technical education superadds "training of two distinct types, which for want of better terms may be called "'Theoretical' and 'Practical.' Experience has shown that industrial efficiency "demands the invariable association of both theoretical and practical ability, but "developed in different degrees. In *technological education* theory is of paramount "importance ; in *industrial education* it is subordinated to practice."

Office Note.

11. This paragraph seems unnecessary. The aims of the two kinds of education referred to in paragraph 3 are *fully* described in the subsequent paragraphs. The existence of this paragraph may tend to confuse, as it introduces needlessly two new terms "Theoretical" and "Practical" with some apparent specific significance, but really none.

Secretary's Note.

I think paragraph 4 necessary. The difference brought out appears to be vital and I would make no change.

P.R.—4–7–15.

May be omitted with reference to His Excellency the Governor's orders.

C.G.T.—13–10–15.

"5. *Technological* education is intended to afford the higher training necessary "for the technical and administrative control of industry. In a position of this kind "practical skill is not so important as wide knowledge and a capacity to analyse and "think ; to formulate ideas and carry them out. The breadth of training required to "do this successfully necessitates as a basis a good general education which will

"enable a student to understand and assimilate as far as possible the various items of "knowledge accumulated in the past in the arts and sciences, and to specialise along "such lines as will be of assistance in the branch of industry in which he engages.

"6. *Technological* education may be of two kinds, which may, for convenience, "be termed 'University' and 'Polytechnic.' Under the university system students "begin their technical studies only after the completion of a good literary education "which, with a technological education superadded, produces a type of man who, so "far as training is concerned, is qualified for the highest position in industry. Under "the polytechnic system the general educational qualification is lower and the type "of man turned out is one who, in general, is qualified only for lower administrative "positions. In both cases the instruction is essentially theoretical in character and "does not in itself constitute a practical qualification : whether it proves to be so or "not depends entirely on the man himself and the way in which he utilises his "opportunities."

Office Note.

12. There seems to be no objection to the retention of these two, except that the last three lines of paragraph 6 appear unnecessary. They merely repeat what has already been stated and may be omitted.

Secretary's Note.

No : the last three lines are very sensible and may be retained.

P. Rajagopala Achariyar—4–7–15.

Further Office Note.

In view of His Excellency's note on page 5 ante all *but the first sentence* of paragraph 5 may perhaps be omitted ; and both the paragraphs 5 and 6 may be thrown into one, the second sentence of the combined paragraph running as follows :—

"It is of two kinds, which may for, etc., etc., 'polytechnic'." The last three lines may also be omitted as suggested above.

C.R.—11–10–15.

I would omit everything except the first sentence of paragraph 5 to which I would add from paragraph 6 "and is essentially theoretical in character" The distinction between "University" and "polytechnic" education is not practical.

C. G. Todhunter—13–10–15.

"7. *Industrial* education on the other hand is essentially practical in character and "any theoretical instruction given can be regarded as useful only in so far as it ampli- "fies, explains or correlates the inferences drawn from practical experience. Divorced "from practice or even carried to a point beyond the field with which a man is practi- "cally conversant, theoretical training is devoid of value. As a natural corollary it "may be said that theoretical training must always succeed and never precede "practical instruction."

Office Note.

13. In this the second sentence "Divorced from practice or even carried to a "point beyond the field with which a man is practically conversant, theoretical "training is devoid of value" may be omitted as unnecessary.

Secretary's Note.

I consider it very necessary ; it is a much needed warning. It should be retained.

P.R.—4–7–15.

I would omit all but the first sentence.

C.G.T.—13–10–15.

164, Home (Edn.)—5

"8. *Technological* education therefore is intended to train two kinds of in-
"dividuals: those qualified to occupy the highest administrative positions and those
"qualified to perform only lower administrative duties, it being however understood
"in both cases that the value of the individual, as an industrial unit, will depend on
"personal qualifications which the training given can only encourage but cannot
"actually impart."

Office Note.

14. The whole of this paragraph is a repetition of what has already been stated in paragraphs 5 and 6 and may be safely deleted.

Secretary's Note.

I see no harm in retaining paragraph (8). We are not drafting a law but a code of rules for the guidance of a department. Fulness is by no means an evil; nor even some repetition and prolixity.

P. RAJAGOPALA ACHARIYAR—4-7-15.

May be omitted with reference to His Excellency the Governor's note.

C. G. TODHUNTER—13-10-15.

"9. *Industrial* education is also intended to train two kinds of individuals:
"the journeyman and the master craftsman, the relation between the two being
"comparable with that existing between the higher and lower classes of technologi-
"cally trained men."

Office Note.

15. In this paragraph the words "journeyman" and "master craftsman" will have to be transposed. The latter denotes the higher type and the former the lower —vide paragraph 22 of the code, Part I; and the transposition is necessary to fit in with the succeeding words in the paragraph.

Secretary's Note.

The transposition may be done.

P.R.—4-7-15.

May be omitted with the previous paragraph.

C.G.T.—13-10-15.

"10. Technical education is at present provided both directly by the State and
"by State aided private teaching institutions. Technological education necessitates
"the provision of highly trained teachers with a complete equipment of technical
"apparatus and library at command and must at present be regarded as exceeding
"that which it is within the power of a private organization to provide. Under
"existing conditions technological education will be provided only in special colleges
"under public management, the scope of private institutions being strictly limited to
"industrial education.

"The training of teachers will be undertaken by the State."

Office Note.

16. This paragraph deals with the question of the agency by which the various classes of institutions are and should be started and maintained. It is needless that a code should lay down the agency which should undertake the establishment of the various types of schools. Further it is not advisable to exclude by specific declaration private agencies from opening particular classes of schools. The code should only lay down the requirements of various classes of institutions and if private management cannot reach that standard, the department will naturally refuse recognition to the institutions started by them; and that will be a sufficient deterrent to ill equipped ones.

As regards the last line that the training of teachers should only be undertaken by the State, the same reasoning applies.

No such distinction in regard to agencies is made in the Educational Rules. *The whole paragraph may therefore, it is submitted, be omited.*

Secretary's Note.

I consider the whole of paragraph (10) very necessary as laying down a correct policy. There is no specific *prohibition* of private agencies, but it is pointed out that, *under existing conditions*, only the State can run technological education with its heavy requirements in the matter of teachers, apparatus, etc. As for the training of teachers, there is nothing wrong in saying that the State will undertake it.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

The office-note above almost coincides with His Excellency's orders on page 5 supra.

C.R.—11-10-15.

May be omitted.

C. G. TODHUNTER—13-10-15.

PART I

CHAPTER II—TECHNOLOGICAL EDUCATION AND TECHNOLOGICAL INSTITUTIONS.

"11. The Department of Industries will confine its attention to industrial educa-
"tion and no technological education is undertaken in that department except with
"regard to dyeing and the leather industry, for which no suitable provision is made
"elsewhere. Instruction in these subjects is of the polytechnic type.

"12. A proposal has been put forward for the conversion of the Engineering
"College into a general technological college of the university type, but as this type
"of education is not directly correlated with industrial education it need not be con-
"sidered in connection with the Department of Industries scheme. For particulars
"regarding this course application should be made to the Principal, Technological
"College, Guindy, when and if that College is sanctioned.

"13. Some individuals who have undergone a course of industrial training may,
"however, possess sufficient ability to profit by a further course of technological
"training of the polytechnic type and to provide for the requirements of such indi-
"viduals the Government of Madras have besides providing institutes of their own
"for the technological teaching of the dyeing and leather trades also acquired an
"interest in the Victoria Technical Institute, Bombay, which empowers them to
"enter pupils at that institution for technological training in other subjects.

"14. *Courses.*—The particulars of the technological courses so far arranged
"are as follows:—

Character and duration of technological courses.

Name of the course.	Where provided.	Duration of course.	Fees per term.
			Rs.
Textile Chemistry	V.T.I., Bombay	8 terms ..	30
Metal Work	Do.	2 ,, ..	30
Leather Trades	Technical Institute, Madras.	6 ,,	30
Textile manufacture	V.T.I., Bombay	8 ,, ..	25
Electrical Engineering	Do.	8 ,, ..	25
Mechanical Engineering ..	Do.	8 ,, ..	25
Dyeing	Technical Institute, Madura.	4 ,, ..	15

"Further particulars regarding the courses given at the Victoria Technical
"Institute, Bombay, may be obtained from the calendar of that institute, or on
"application to the Principal. Regarding the Madras courses information may be
"obtained from the Director of Industries.

"15. *Admission.*—Admission to all these polytechnic courses is by examination, "oral and written, held simultaneously in Madras, or if necessary also at Madura "and Bezwada in April of each year. The examination will be of a non-technical "character, but will presuppose a general education about equivalent to the Matri- "culation standard. The examination is not competitive, being intended merely for "the purpose of ascertaining whether applicants are fit for higher training or not.

"16. The conditions for admission to the qualifying examination are as "follows:—

"(1) Candidates must adduce evidence of at least two years' apprentice "training in the workshop of a recognized industrial school or in a commercial "factory. This practical qualification the Director has power to waive, but he will "do so only in special circumstances and when he is fully satisfied that the candi- "dates' practical training will be completed subsequently.

"(2) Candidates must not be under 16, nor in general, over 20 years of "age.

"(3) Candidates must produce a letter of recommendation either from the "manager of the industrial school they have last attended, from their present "employer or, if not practically trained at all, from the headmaster of the school in "which they last studied.

"(4) Candidates must furnish evidence that their general education is up to "the required standard (Matriculation) and must also submit a certificate of "physical fitness signed by a qualified medical officer.

"(5) If a candidate wishes to complete his education in Bombay and is under "age he must further produce a declaration signed by his parent or guardian sanc- "tioning his prosecuting his studies in Bombay and testifying to his financial "ability to complete a course of study there. If the candidate is of age he must "himself sign a declaration of financial ability to study.

"17. *Fees and stipends.*—The fees for the various courses are given in paragraph "14. To selected candidates proceeding to Bombay the Government of Madras will, "for the present, award a stipend of Rs. 10 per mensem, this being the estimated "difference in the cost of training in Bombay and Madras. Every student shall, "before any stipend is paid to him, enter into an agreement to be executed on stamped "paper in the form described in Appendix XXVI. Such pecuniary assistance will "not be given to pupils attending technological courses provided in this Presidency.

"18. *Scholarships.*—In addition to this general contribution, deserving pupils "proceeding to Bombay may be awarded a further scholarship of the value of Rs. 25 "per mensem, the combined value of the two practically covering the whole of the "cost of living and education at Bombay. These scholarships will be awarded on the "results of the qualifying examination, to applicants who appear to possess special "merit and whose resources are such as to preclude their obtaining further training "except with this State assistance. For technological courses provided in this "Presidency the value of the scholarship will be reduced to Rs. 10.

"Forms of application for admission to the qualifying examination (Appendix "XX) for scholarships (Appendix XXV) as well as all further particulars regarding "these courses may be obtained from the Director of Industries. Application for "scholarships must be made not later than February 1st and application for admis- "sion to the examination not later than 1st March of every year.

"19. In the event of candidates possessing technical qualifications in excess of "the required minimum, they may, at the discretion of the Director of Industries (in "consultation with the Principal of the Victoria Technical Institute when necessary), "be permitted to take an abbreviated course of training at the latter institute. On "this point no hard and fast rule can be laid down. In general, however, a pupil "holding a Craftsman's certificate will be excused one term at the beginning and "one term at the end of his course.

"20. *Attendance and dismissal.*—All students must be regular in attendance. "Students requiring leave must apply to the Principal of the institution and must "not avail themselves thereof without his previous sanction. Continued irregularity "or absence without leave will be regarded as a breach of rules and is liable to lead "to dismissal.

"In the case of students receiving scholarships or stipends, casual leave up to "seven days at a time and fifteen days altogether in the year may be sanctioned on "full scholarship or stipend by the Principal of the institution. Leave for a longer "period will be sanctioned only on loss of scholarship or stipend for the period of "absence and then only on production of medical certificate. Absence for a longer "period *ipso facto* means the cessation of the scholarship or stipend and this will only "be renewed by the Director, on application, after a careful consideration of circum- "stances has shown the application to be reasonable.

"Continued idleness or serious misconduct is a sufficient reason for dismissal. "If students in receipt of stipends fail to complete the course for which the stipend "is offered or if they are dismissed they or their guarantors become liable to Govern- "ment for the refund of the whole amount of the stipend paid (as laid down in the "agreement, Appendix XXVI). If a stipendiary student is removed from the "school by the Principal on account of incapacity no refund will be demanded.

"21. *Examinations.*—At the end of the prescribed course of technical training "an examination will be held, on the result of which technological certificates will "be assigned, but not awarded unless or until the candidate has completed a further "prescribed course of practical training or satisfied the examiners regarding his "practical capacity."

Office Note.

Very necessary.
P.R.—4-7-15.

I see no harm.
P.R.—4-7-15.

Government are *not committed.* The wording of paragraphs 17 and 18 does not make scholarships *obligatory.*
P.R.—4-7-15.

17. This chapter points out to what extent technological instruction will be provided by the State and where such instruction can be had. In dealing with the latter point, details of the working of the Victoria Technical Institute, Bombay, are imported in the chapter. It also commits the Government to the grant of scholarships and other facilities to enable students of this Presidency to prosecute their studies there.

It is submitted that this chapter contains very little of matter to be retained for the purposes of the code. It is not the function of the code to declare where instruction in particular subjects can be had, but only to prescribe general rules for the guidance of institutions if they are started. It is pointed out by Mr. Tressler that in this Presidency technological instruction of the *University* type is nowhere to be had now; and it may not therefore be necessary to lay down any rule in their behalf.

I see no harm in giving full information. I should say that it is an advantage just now.
P.R.—4-7-15.

Paragraph 12 of the draft code may be omitted.
P.R.—4-7-15.

As regards technological education of the *polytechnic* type, this Presidency has at present arranged for instruction in leather and dyeing industries only and for other branches students will have to proceed to Bombay. It does not seem necessary to incorporate in the code, except perhaps as an appendix, details as to the working of the Bombay institute, and much less to say what facilities will be provided by the Government for students proceeding there. Further, so far the Government have only agreed to grant as a *temporary* measure six scholarships annually tenable for four years for students proceeding to Bombay. After two repeated advertisements, only one candidate of the prescribed qualification was forthcoming and a selection of two others had to be made from those who did not possess the minimum general educational qualifications laid down. Thus the continuance of this scheme of scholarship

G.Os. 613, Educational, 10th July 1912, and 725, Educational, 8th August 1913.

G.O. 1029, Educational, 1st September 1914.

depends upon the success which may attend in future years the endeavour to secure qualified candidates. It will not therefore be advisable to commit the Government now definitely and permanently to a scheme of scholarship the success of which has yet to be proved. Mr. Tressler's idea is that the Government should subsidize the Bombay institute by initial and recurring grants so that an interest might be acquired therein by the Government. This question has yet to be considered and decided upon. In the meanwhile, it is undesirable to refer to it in the code. The present scheme of temporary scholarships may be printed as an appendix to the code, if necessary.

I see nothing in the draft code *committing* the Government to a *permanent* scheme of scholarships.

P.R.—4-7-15.

Quite so.

P.R.—4-7-15.

As matters *now* stand, we *have* to work in collaboration with the Bombay institute. There is no use in ignoring that. The references to the Bombay institute appear to me unobjectionable.

B

P.R.—4-7-15.

In respect of the dyeing and leather industry in which subjects instruction will be, at present, provided in this Presidency, a few general rules as to admission, etc., have already been approved in individual Government Orders. These alone may be at present incorporated in the code in general language. If subsequently any further branches are opened and the code needs revision on that account, alterations may then be made.

G.Os. 613, Educational, 10th July 1912 and 725, Educational, 8th August 1913.

That is of course understood.

P.R.—4-7-15.

If these are approved, the following alterations in this chapter may be made.

Paragraphs 11 to 13, 14 (portion), 17, 18 (portion) and 19 will then be wholly unnecessary and may be omitted and the other paragraphs have to be adapted to the limited requirements referred to above. The following set of rules for this chapter is suggested :—

A

"Technological education of the University type is beyond the purview of this Code.

"As regards technological instruction of the polytechnic type, the opening and maintenance of institutions for the purpose will be specially controlled and sanctioned by the Government, as such education necessitates the provision of highly trained teachers with a complete equipment of technical apparatus and library at command.

"The duration of the course will generally extend from four to six terms and the fees per term from Rs. 15 to Rs. 30 to be determined according to the nature of the subject with the approval of Government in each case.

"Admission to all the polytechnic courses will be limited to candidates who have at least completed their high school course and possess school-leaving certificates considered by the Director of Industries to evidence satisfactory progress.

Cf. paragraph 15, page 4 of code and paragraph 13 (2) of Dr. Marsden's letter, page 8 of G.O. 725, Educational, 8th August 1913, also paragraph 9 of Mr. Guthrie's letter, page 8 of G.O. 613, Educational, 10th July 1912.

"Candidates must adduce evidence of at least two years' apprentice training in the workshop of a recognized industrial school or in a commercial factory. This practical qualification the Director has power to waive, but he will do so only in special circumstances and when he is fully satisfied that the candidates' practical training will be completed subsequently.

"Candidates must not be under 16, not in general over 20 years of age.

"Candidates must produce a letter of recommendation either from the manager of the industrial school they have last attended, from their present employer or, if not practically trained at all, from the headmaster of the school in which they last studied.

"Candidates must submit a certificate of physical fitness signed by a qualified medical officer.

"Applications for admission to the course should be made to the Director through the head of the institution not later than the 1st of March of every year.

"All students must be regular in attendance. Students requiring leave must apply to the Principal of the institution and must not avail themselves thereof without his previous sanction. Repeated irregularity or absence without leave or continued idleness or serious misconduct will be regarded as a breach of rules and may lead to dismissal.

"At the end of the prescribed course of technological training an examination will be held under the direction of the Director of Industries on the result of which technological certificates will be assigned by him but not awarded unless or until the candidate has completed a further prescribed course of practical training or satisfied the examiners regarding his practical capacity."

24

In the above draft of the rules, the separate special examination for admission, referred to in paragraph 15, has been omitted, as neither of the Government Orders containing the rules relating to the leather and dyeing schools prescribes any such examination. Further, where a school-leaving certificate showing tolerably good progress is produced, there seems no reason why the candidate should be subjected to any further examination. In lieu of the examination, however, it has been proposed, subject to approval, to substitute the prior approval of the Director to the candidate's fitness.

G.Os. 613, Educational, 10th July 1912 and 725, Educational, 8th August 1913.

I see no objection to the special examination.

P.R.—4-7-15.

Reference to scholarships has also been omitted, as no definite scheme in that regard has yet been approved by the Government. As a matter of fact, Dr. Marsden specifically recommended that no scholarships should be granted for the dyeing class.

Paragraph 6, page 6 of G.O. 725, Educational, 8th August 1913.

Secretary's Note.

I have considered paragraphs 11 to 21 with some care. The only change I have to suggest is the omission of paragraph 12.

P. Rajagopala Achariyar—4-7-15.

Further Office Note.

With reference to His Excellency's note on page 5 supra references to the Bombay Victoria Technical Institute and the special scheme of scholarships tenable in that institution will have to be omitted, as the proposals of Mr. Tressler to endow the institution and institute sholarships have been disallowed.

The revised draft rules for this chapter suggested at "A" on page 20 ante are for approval. They are based on the Government orders already issued sanctioning the dyeing and leather trade classes.

In connection with the proposal to endow the Victoria Technical Institute, the Secretary observed that the entries in the Code relating to this institution should be confined to a description of the scholarship scheme, already sanctioned and now in force. It has been proposed at "B" on page 21 ante that the scheme should be printed as an appendix to the Code. For orders as to whether this will do.

Paragraphs 1 to 5 of G.O. 1029, Educational, 1st September 1914.

C.R.—11-10-15.

I would say—

"The only subjects in which technological instruction is now given in this "Presidency are dyeing and leather work. The course for the former is four terms "and the fee Rs. 15 per term and the course for the latter six terms and the fee "Rs. 30 per term.

"Candidates for admission to these classes should be not under 16, nor "over 20 years of age. They must produce satisfactory school-leaving certificates, "and certificates of character from their last schoolmaster or employer. Preference "will be given to candidates who have undergone at least two years' apprentice "training in the workshop of a recognized industrial school or a commercial factory.

"Applications for admission should be made to the Director of Industries not "later than the 1st March."

"All students must be regular in attendance. Students requiring leave must "apply to the Principal of the institution and must not avail themselves thereof "without his previous sanction. Continued irregularity or absence without leave will "be regarded as a breach of rules and is liable to lead to dismissal.

"At the end of the prescribed course of technical training an examination "will be held, on the result of which technological certificates will be assigned, but "not awarded unless or until the candidate has completed a further prescribed course "of practical training or satisfied the examiners regarding his practical capacity."

Technical and applied chemistry, sanitary engineering and plumbing, textile manufacture, electrical engineering and machanical engineering is given at the Victoria Technical Institute, Bombay. The course covers eight terms in all cases. The fee is Rs. 30 a term for the first subject and Rs. 25 a term for the rest. To encourage study of these subjects the Madras Government are prepared to give a limited number of scholarships annually to students proceeding to Bombay subject to the following rules:—

The value of the scholarship will be Rs. 30 a month.

Applications for scholarships should be submitted to the Director of Industries not later than 1st February in the form printed as appendix—written in the candidates' own writing.

Candidates should be either graduates in Arts or have passed the intermediate examination of the Madras University. Candidates 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. The applications should show clearly age, nationality and general educational attainments.

The holders of the 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, however, be required to find two sureties to execute an agreement, providing for the refund to the Government of the amount of the scholarship, should he fail to obtain the diploma granted at the end of the course.

The scholarships will be disbursed through the Principal of the Bombay Institute. In case the Principal reports adversely about any scholarship-holder, the schloarship will be stopped.

PART I

Chapter III.—Industrial Education.

"22. Unlike the two types of technological education, the 'university' and "'polytechnic' type, which are entirely distinct, the two types of industrial educa- "tion (which may be termed the 'journeyman' and 'craftsman' types) are closely "connected, the latter being an extension and amplification of the first. A journey- "man is a man who has merely learnt a trade, whereas a craftsman is a man who "also in addition knows something of general principles; possesses, in fact, a certain "theoretical knowledge in addition to practical skill. For purposes of efficiency a "journeyman requires only that minimum amount of general education which every "thinking being ought to possess: a craftsman, on the other hand, must carry his "education to a point enabling him to understand text-books with a certain amount "of ease. It will be observed that the practical qualification is the same in both "cases, but that the craftsman's course of training includes also theoretical training "and calls for a higher standard of general education than that prescribed for "journeymen."

Office Note.

18. The third sentence in this paragraph seems unnecessary and may be omitted. The expression therein, viz., "education which every thinking being ought to possess" is very vague. What is aimed at by this sentence is sufficiently made clear by the last clause of this paragraph.

Secretary's Note.

I would make no change in paragraph 22.

P. Rajagopala Achariyar—4-7-15.

I would say—

"Industrial education is of two types, one suited for the training of what may be termed a journeyman, that is, a man who has merely learnt a trade, the other suited to produce a craftsman, that is a journeyman with some theoretical knowledge of first principles added to his practical skill."

C. G. Todhunter—13-10-15.

"23. Whilst it is eminently desirable that pupils should have attained the "minimum standard of general education required before attempting to learn a trade "it is at present impracticable to insist on this point and any system of industrial "education must therefore make provision not only for practical and theoretical "training but for general education also."

Office Note.

19. The principle that arrangement for industrial education should also provide for general education has already been recognized by this Government in connection with the Madura Technical Institute. In the subsequent paragraphs the case of craftsman's course special

Paragraph 7 of Mr. Chatterton's letter on page 14 of G.O. 647, Educational, 18th July 1912, and paragraph 7 of the order, page 34 of the Government Order.

Mr. Tressler proposes that especially in arrangements should be made to provide general education up to the fourth form standard so that candidates who come up to study for the journeyman's course may have opportunities of continuing their studies to the higher grade. At the informal conference it has been accepted as necessary that there should be provision for general education also. This paragraph may therefore be accepted.

P.R.—4-7-15.

The language of this paragraph does not however seem suited to a Code. The substance of this paragraph may perhaps be put in the following form:—

"In order to provide for cases where candidates before attempting to learn a trade do not possess the minimum standard of general education required, it is desirable that the scheme of industrial education must make provision not only for practical and theoretical training but for general education also."

Secretary's Note.

Mr. Tressler's wording is more forcible and I would leave it alone.

P. Rajagopala Achariyar—4-7-15.

Further Office Note.

Please see note on page 33 seq.

C.R.—11-10-15.

The draft may stand with the addition of "generally" after "at present" in line 3.

C. G. Todhunter—13-10-15.

"24. *General education.*—General education may be divided into two parts: "the first covering the amount of education required by a journeyman, the second "covering the extra amount of education required in connection with the craftsman's "course. It has been decided that the minimum standard of general education for "the former shall be fixed as the fourth standard and the minimum for the latter as "the fourth form."

Office Note.

20. The standard of general education prescribed does not seem high. In the original note of Mr. Tressler, it was proposed to fix the *third* form as the standard of qualification for the normal training stage, almost corresponding to the craftsman's stage in the present Code, and the fourth standard as the qualification for the workshop stage. While the latter agrees with the present proposal, the standard of the former has been raised from the third to the fourth form. It cannot be verified whether the standard of *industrial* education now proposed for the higher course (craftsman's) necessitates the higher general education standard. It is in the fourth form that a beginning is made in the study of

Page 19 of G.O., 833, Educational, 16th July 1914.

sciences, etc., and the study of a year in these subjects would only be a desirable acquisition on the part of the candidates. The proposals may therefore be approved.

Yes. P.R.—4-7-15.

A In the second sentence of this sub-paragraph the words "it has been decided that" may be omitted.

Yes. P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

For the last sentence may be substituted—

"The minimum standard of general education for the former is approximately that of the fourth standard and for the latter that of the fourth form."

C. G. TODHUNTER—13-10-15.

"The fourth standard of attainment is that testified to by the ordinary "lower elementary certificate and as the instruction is elementary and easily "obtainable, no special courses, peculiar to industrial schools, need be devised. A "certificate, termed the craft qualification certificate, from an Inspector of Schools to "the effect that a pupil has passed the fourth form in a secondary school represents "the higher qualification, but special classes may also be constituted, if necessary, in "connection with all industrial schools recognised to teach up to the higher (crafts-"man's) standard. These classes, in which only subjects of industrial value will be "taught, will carry on a pupil from the lower elementary standard to the fourth form "standard by a half time course of instruction extending over a period of four years. "These classes must conform to the general rules of the Department of Public "Instruction and will be inspected by an officer of that department who will, at the "end of the course, award craft qualification certificates (abbreviated course) to "pupils who duly complete it.

"For industrial purposes the full and abbreviated certificates are of equal value "and will be treated as such. The control and organization of these special classes "is in the hands of the Department of Public Instruction, but application for their "creation and recognition must, in the first instance, be made to the Director of "Industries. If approved, the application will be forwarded to the Director of "Public Instruction which latter officer will then deal with all further questions "connected with the classes. Applications *will not be forwarded by the Director of "Industries except those on behalf of schools considered by the Director as competent to "provide theoretical training.*"

Office Note.

21. It is proposed to compress all the instruction that is usually given in the first four forms in a half-time course of four years. From the proceedings of the conference it will be seen that no definite decision was arrived at with reference to the question whether all the subjects of the ordinary school curriculum should be taught to the industrial pupils, though the question was specifically put to it. The matter has to be settled in consultation with the Director of Public Instruction. Probably three hours a day may be presumed to be available for the general education and night classes are also suggested.

The Director of Public Instruction has to be asked. P.R.—4-7-15.

The Director of Public Instruction has also to be consulted as to whether he agrees to retain the control of the general education classes in industrial schools and whether he can arrange for their inspection, etc. The Director of Public Instruction has undertaken to control and advise regarding the classes in jails, the criminal settlements, etc.

Yes. The Director of Public Instruction has to be asked. P.R.—4-7-15.

G.O. 1849, Judicial, 11th September 1913.

This paragraph may on the whole be retained with the slight modification suggested at **A** above.

S.K.—15-6-15.

C.R.—20-6-15.

26

Demi-official—from the Hon'ble Diwan Bahadur P. RAJAGOPALA ACHARIYAR Avargal, C.I.E., Secretary to Government, Educational Department.
To—the Hon'ble Mr. H. S. DUNCAN, Acting Director of Public Instruction.
Dated—Ootacamund, the 9th July 1915.
No.—744-1, Edl.

A separate code of regulations for industrial and technical schools (copy enclosed) has been drafted by Mr. Tressler in consultation with representative committees of school managers and employers of labour. Paragraph 24 of chapter III of Part I of the code relates to the opening of general education classes in industrial schools. It is proposed to compress all the instruction given in the first four forms of a secondary school in a half-time course of four years. It is also proposed that the classes must conform to the general rules of the Department of Public Instruction and will be inspected by the officers of that department. I am to request you to state whether you agree to the above proposals.

I am also to enclose an extract from the abstract proceedings of the committees which dealt with the question of general education in industrial schools

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Demi-official—from the Hon'ble Mr. H. S. DUNCAN, Acting Director of Public Instruction.
To—the Hon'ble Mr. C. G. TODHUNTER, I.C.S., Acting Secretary to Government, Educational Department.
Dated—Madras, the 23rd July 1915.
No.—98.

Please refer to Mr. Rajagopala Achariyar's demi-official No. 744-1, Educational, dated 9th July 1915.

I am afraid I cannot agree to Mr. Tressler's proposals. It is obviously impossible to compress into a half-time course of four years the work of a four years' full-time course.

Again, until I have fuller information regarding the working of these schools, I am not in a position to accept the proposal that they be inspected by officers under my control. There is the danger of possible friction between the Departments of Education and Industry unless the limits of administrative and financial control that bound the functions of each department with regard to these schools are clearly laid down at the outset.

If you so desire it, I shall note in detail on paragraph 24 of chapter III of part I of the proposed Code.

P S.—I have sent to Madras for the Code which was forwarded to me with Mr. Rajagopala Achariyar's letter and will send it to you in a day or two.

Demi-official—from the Hon'ble Mr. C. G. TODHUNTER, I.C.S., Acting Secretary to Government, Educational Department.
To—the Hon'ble Mr. H. S. DUNCAN, Acting Director of Public Instruction.
Dated—Ootacamund, the 29th July 1915.
No.—2576-1.

With reference to your letter No. 98 of the 23rd instant, I am to request you to note in detail on paragraph 24 of chapter III of part I of the draft Technical Education Code and to say that any suggestions you have to offer regarding the organization and control of general education classes in industrial schools will be welcome.

Demi-official—from the Hon'ble Mr. H. S. DUNCAN, Acting Director of Public Instruction.
To—the Hon'ble Mr. C. G. TODHUNTER, I.C.S., Acting Secretary to Government, Educational Department.
Dated—Ootacamund, the 25th August 1915.

In reply to your demi-official No. 2576-1, Educational, dated 29th July 1915, I offer the following suggestions and observations on paragraph 24 of chapter III of part I of the draft Technical Education Code:—

A 1. For "lower Elementary certificate" read "Elementary school-leaving certificate".

2. "A certificate, termed craft qualification certificate, from an Inspector of Schools . . represents the higher qualification."

No such certificate is required because a transfer certificate from the headmaster of a recognized secondary school showing that the pupil is fit for promotion to fifth form should suffice.

3. '*These classes, in which only subjects of industrial value will be taught.*'—I do not know what these subjects are.

4. "*Will carry a pupil from the lower elementary standard, extending over a period of four years—These classes must conform to the general rules of the department of Public Instruction.*"—This proposal is obviously impossible unless the Director of Industries is prepared to restrict the subjects taught to at most half of what is now taught in schools. And besides the classes cannot conform to the general rules of the Educational Department unless they follow the courses recognized by this department. At present the Director of Public Instruction prescribes no courses for pupils in secondary schools up to third form but all pupils in and above fourth form are presumed to have a secondary school-leaving certificate maintained on their behalf, and the secondary school-leaving certificate course is more or less defined under the scheme for the award of secondary school-leaving certificates. According to the proposal of the Director of Industries it would appear that he desires the Director of Public Instruction to recognize a fourth form half-time instruction in subjects which I may consider do not give a "general education." I suspend further remarks on this point until I know what subjects the Director of Industries considers should be taught.

5. "*And will be inspected by an officer of that department.*"—This proposal will necessitate additional appointments in the Educational Department to cope with the additional work. There is no objection to the inspection being done by officers of the Educational Department provided that the schools are inspected on the lines on which other recognized institutions working under Madras Educational Rules are inspected and provided that the inspecting officers are in no way under the control of the Director of Industries.

The Code of Regulations regarding Technical Education assumes the existence of an Inspector of Industrial Schools. If a competent graduate inspector is appointed, there would appear to be no need for this department to undertake the organization or control of any of the "general educational classes" proposed by the Director of Industries.

6. "*Who will at the end of the course award craft qualification certificates (abbreviated course).*"—This proposal would apparently necessitate a separate examination which I do not favour. A certificate from the head of the institution to the effect that the pupil has satisfactorily completed his general education course should be sufficient.

7. "*The control and organization of these special classes . . . to the Director of Industries. If approved . . . connected with the classes.*"—This suggestion implies a manner of dual control, a policy which I do not favour.

There is no explicit information in regard to the financial provision that is necessary for the conduct of these general education classes, but it would appear from a perusal of the Code that they are to be financed from the funds at the disposal of the Director of Public Instruction and not from those at the disposal of the Director of Industries. I should like this point made clear before I proceed to discuss it.

In section A I have examined paragraph 24 of chapter III in detail. I shall now proceed to a general survey of the scheme. I may state here that there is no difficulty in working the general educational scheme up to and including fourth standard, nor up to the fourth form of the ordinary secondary school course.

In the first paragraph of section 24 the Director of Industries states that for the craftsman's course the minimum standard of general education shall be the fourth form and yet in the succeeding paragraph he talks of a half-time course of instruction extending over a period of four years as an equivalent minimum of general education. I cannot reconcile the two statements. Apparently he is content with the education given in secondary schools recognized by the Department of Education. If he can utilize the existing facilities well and good: if, however, he desires some other form of instruction, e.g., in "only subjects of industrial value," I should like him to state more explicitly what subjects he wishes to be taught, what hours he intends should be devoted to these subjects, whether they are to be taught necessarily in industrial schools or whether use cannot be made of existing secondary schools, if the latter whether the classes are to be held during the normal school day or whether in the early morning or in the evening, in order that the Director of Public Instruction may be able to advise thereon.

I have criticised the scheme in the belief that when more detailed and definite information is available it will be possible to formulate a general education course which will be acceptable to the Director of Industries. A modified and organized scheme on the lines proposed by the Director of Industries may work extremely well, but I am at present, in view of the meagre details before me, unable to extend such approval to it as I should wish.

I would therefore suggest that Mr. Tressler be asked to state

(1) What are the subjects of industrial value to be taught in the special classes.

(2) Whether these subjects are to be taught only in industrial schools, or whether it is his intention to have them taught in existing secondary schools, or in both.

(3) If they are to be taught in secondary schools, whether there are to be special classes in these schools.

(4) Whether it is his intention and desire to have a separate examination for the award of "craft qualification certificates (abbreviated course)".

(5) Whether the expenditure on half-time classes is to be met from the Educational or the Industrial budget.

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Demi-official—from the Hon'ble Mr. C. G. Todhunter, I.C.S., Acting Secretary to Government, Educational Department.
To—K. T. B. Tressler, Esq., Director of Industries.
Dated—Ootacamund, the 27th August 1915.
No.—2929-1.

In paragraph 24 of part I of the draft Technical Education Code it is stated that the minimum standard of general education required for the craftsman's course is the fourth form. It is also stated that special classes in which only subjects of industrial value will be taught may be organized and these will carry a pupil on from the lower elementary standard to the fourth form by a half-time course of instruction extending over a period of four years. In the examination of these proposals the following questions have been raised:—

(1) What are the subjects of industrial value which are to be taught in these special classes?

(2) Are these subjects to be taught only in industrial schools or is it your intention to have them taught in existing secondary schools or in both?

(3) If they are to be taught in secondary schools, are there to be special classes in these schools?

(4) Is it your intention and desire to have a separate examination for the award of "craft qualification certificates (abbreviated course)"?

(5) Is the expenditure on these half-time classes to be met from the Educational or the Industrial budget?

I am to request you to furnish me with brief answers to these five questions.

Demi-official—from K. T. B. Tressler, Esq., Director of Industries.
To—the Hon'ble Mr. C. G. Todhunter, I.C.S., Acting Secretary to Government, Educational Department.
Dated—Madras, the 31st August 1915.

Your letter of 27th.

(1) English, arithmetic, mathematics, science and drawing.

(2) All industrial higher grade schools are—or should be associated with secondary schools and the above subjects are to be taught in existing secondary schools to industrial pupils. They are not to be taught in industrial schools as

(*a*) I want to avoid reduplication of general literary staff.
(*b*) I want ultimately to eliminate the courses and make industrial pupils finish their schooling before taking up handicraft.
(*c*) I think the courses can be worked in with the ordinary secondary school ones. My idea is for industrial pupils to take half the ordinary full literary courses in half the time.

(3) Vide (*c*) above. On this point I cannot offer an opinion as I know nothing about the system of general education. If (*c*) is unworkable it will be necessary to have special classes.

(4) A special examination seems unnecessary: I understand that it is usual in the Department of Public Instruction to accept a certificate from the headmaster. This will suffice.

(5) I have no views on this point. If special expenditure has to be incurred it might be paid for by Industries.

Finally my object in leaving the general education side to the Department of Public Instruction is because they have specialised knowledge on the matter and we in the Industries have not. It seems illogical therefore for us to deal with questions of general education, but if the difficulties in the way of Department of Public Instruction control are insurmountable, the Department of Industries will have to take over its own general education.

Educational Department.

General education.

As His Excellency the Governor has more than once asked that the Technical Education Code may be pushed forward, I venture to request orders in advance on a preliminary point which has been delaying it the last two months and seems likely to delay it indefinitely. This is the question of general education for the journeymen's or craftsmen's classes. Mr. Tressler prescribes no test for entry to an industrial school (paragraph 23) although he exhorts managers in the strongest terms (paragraph 33) to see that their pupils have finished their general education before entering as

they will have no time to do so thereafter. Once they have entered, however, those who have no general education (and they will be the vast majority) have to acquire one as best they can. Before they can pass out of the first stage of all, the "Practice" stage (a 24 months' course), they must produce a certificate of qualification by the fourth standard (ordinarily a five years' course for children). No provision is made for their acquiring this part of their education. The subject is dismissed with the remark that "as the instruction is elementary and easily obtainable no special courses "peculiar to industrial schools need be devised." After passing out of the "Practice" stage, before the pupils can appear for the craftsmen's certificate (a five * years' course, they are required to show that they have qualified by the fourth form standard (a nine * years' course for childern, i e., four years additional to the fourth standard). The manner in which they are to do this is left to the Director of Public Instruction, but provision is made for half-time courses of technical work in order to leave half the day for literary education, and the Director of Industries appears to contemplate confining the course to "industrial" subjects which he defines as English, mathematics, science and Drawing.

* Workshop course, three years, and theoritical (or craftsmen's) course, two years (generally) (pages 40 and 41 of the code).
Paragraph 7, page 33 of the Code.

	years.
* Infant class	1
First four classes ...	4
First four forms	4
	9

The Director of Public Instruction naturally sees difficulties about the scheme, which I venture to think is unworkable. We may agree that it is impossible to insist on any educational qualification before entry, since the schools would get no students else. Once they are in we may agree that it is desirable that a journeyman should be able to read a simple text-book (paragraph 22), preferably in his own language, and that some elementary knowledge of English, mathematics, science and drawing is necessary for the craftsman, but we may leave the manner in which it is to be acquired for the schools themselves to develop. It seems to be out of the question to ask existing schools, which are for the most part under private management, to alter their times and courses in order to suit technical students, or to expect boys put into technical schools because they hadn't the brains for a literary education to take the same course as their brighter compeers while giving only half their time to it. Moreover the full craftsman's course is already seven years so that the half-time course would run to eleven.

Cf. paragraph 188 of the Report by Colonel Atkinson and Mr. Dawson.

I submit therefore that it would be sufficient for the present to enter in the Code--

(1) the present exhortation to managers to admit to technical schools only boys who have completed their general education,

(2) a requirement that they must (either) themselves (or by arrangement with other schools) provide that pupils in the journeymen's course should receive an elementary education approximately up to the fourth standard, and pupils in the craftsmen's course instruction in English, mathematics, science and drawing approximately equal to that given in the fourth form, and

(3) a provision that no pupil shall be promoted from one stage of technical instruction to another until he has satisfied the Inspector of Industrial Schools that he has received sufficient general education to be able to understand the instruction given.

As time goes on we may hope that the development of general education and an increasing appreciation of technical education will render it possible to insist on a qualification before entry, and meanwhile the managers, with the assistance of the Inspector of Industrial Schools, will have worked out a system of night schools or other means of supplementing the general education of their scholars on which it may be possible to base a code of rules. For the present elasticity is above all things desirable.

If the above proposals are approved, the general education portion of the Code will be amended accordingly and the remaining portions of it can then be dealt with.

C. G. Todhunter—6-9-15.

I shall be glad to have the views of the Director of Public Instruction on this.

P[entland]—8-9-15.

To the Director of Public Instruction.

C.G.T.—6-9-15.

Office of the Director of Public Instruction.

I agree that the general education provisions in Mr. Tressler's Code are unworkable and with what Mr. Duncan has written about them.

I would also go further than the Secretary and advise Mr. Tressler to give up the idea that the existing schools can help at all in the general education of his pupils. In the secondary schools the pressure on staffs and accommodation is such that I do not think they could make any special arrangements for industrial pupils. The presence of half-timers in elementary schools would make their working difficult and they also are often over-crowded and under-staffed. I think that the Director of Industries will have to face the difficulty of providing general education in his own schools.

J. H. Stone—18-9-15.

Educational Department.

Submitted to the Secretary.

It is for consideration whether the file may now be sent to the Director of Industries u.o. for further remarks with reference to the Director of Public Instruction note above and he may be asked to state whether he accepts the Secretary's suggestions above with the omission of the words enclosed in brackets in clause (2).

C.R.—18-9-15.

Will the Director of Industries please examine the suggestions and opinions above and note his views thereon as early as possible?

C.G.T.—18-9-15.

Office of the Director of Industries.

I would not be prepared, except as an extreme measure, to make my own provision for general education, as suggested by the Director of Public Instruction. The reason is that general education is outside my province and I do not regard myself as competent to define standards therein.

From the remarks of the Director of Public Instruction I gather that the certificate of the headmasters of schools is accepted as evidence of pupils having attained a certain standard. This being so, it seems to me that the obvious solution is that suggested by Mr. Todhunter, viz., that school managers should make their own handboat for general education. Industrial schools, it must be remembered, are almost invariably associated with general literary schools and it should not be difficult to make the handboat suggested.

I presume it will be possible to get from the headmaster of the literary school a certificate that the pupil is up to the fourth standard or fourth form and this is all that is required. If this is not feasible I would suggest that the literary attainments of the industrial pupils be tested by a sub-assistant inspector who would accompany the Inspector during inspection. His services would be required from January to March.

K. T. B. Tressler.

The Director of Public Instruction had better see this file again with special reference to the note of the Director of Industries and be asked to note again. I should like also to ask, is it out of the question to prescribe a general education qualification now instead of later for admission into an industrial school and if so, why?

P[ENTLAND]—28-9-15.

Will the Director of Public Instruction please advise on the proposal of the Director of Industries that a sub-assistant inspector in each language area should be lent to the Inspector of Industrial Schools to assist him in the literary part of the examination of the pupils? The whole of the examination will take about three months so that each sub-assistant would be wanted for a month or so.

The difficulty about prescribing a general education qualification now is, I understand, that no boys with any general education will go to industrial schools. I enquired at Coimbatore recently and found that they had only one boy who had any general education at all. He had picked up the technical work in half the time the other boys had taker.

C. G. TODHUNTER—1-10-15

OFFICE OF THE DIRECTOR OF PUBLIC INSTRUCTION.

January, February and March are the busiest months for sub-assistants and we refuse all privilege leave in those months except in cases of real urgency. It would therefore be very inconvenient to lend men as Mr. Tressler suggests. A reference to my letter about the reorganization of the inspectorate will show how very much overworked these officers are.

Mr. Tressler now says that most of the industrial schools are connected with ordinary schools and I agree with him in thinking that it will be a matter for special arrangement in each case for providing literary instruction. Any such instruction would come under the ordinary inspection of this department or could be made to do so by instructions to officers. As he says certificates from headmasters would show that pupils had reached the necessary standard in the subjects he requires.

I should think that all details about general education might be left out of the Code, it being merely stated that the standards shall be those of the fourth standard and fourth form in the subjects Mr. Tressler requires and that a certificate from a headmaster will suffice. Since this department does not lay down exactly what part of the curriculum should be completed in each form Mr. Tressler had better lay down with some detail what he requires in arithmetic and mathematics, science and drawing. He will find the syllabuses for the first three followed in the three higher forms in the secondary school-leaving certificate scheme printed in the Calendar of the Commissioner for Government Examinations and what the department has to say about drawing in "Hints and Suggestions for Secondary schools." There will be no particular difficulty about "drawing" if Mr. Tressler adheres to the provision of free-hand and model drawing in connection with mechanical and wood work, but I cannot help remarking that I should suppose what is more wanted is geometrical and measure-

I have seen some very lately in London.

ment drawing. In all the best schools in England where industrial work or manual training is taken up drawing and to some extent arithmetic and geometry are closely associated with it. Since drawing is to be part of the general education, I should think freehand and model might be left out of the industrial education courses.

J. H. STONE—2-10-15.

His Excellency the Governor approves of the revision of the Code being proceeded with on the above lines.

C. G. TODHUNTER—4-10-15.

It is submitted that the following may be substituted for paragraphs 23 and 24:—

"Before a student can enter upon the workshop stage of the journeyman's course he must produce a certificate from the headmaster of a recognized school to the effect that he has received an elementary education up to the fourth standard and before he can be admitted to the theoretical stage of the craftsman's course he must produce a certificate to the effect that he has received instruction in English, mathematics, science and drawing approximately equal to that given in the fourth form of a secondary school."

The Director of Public Instruction states that the Director of Industries should be asked to lay down with some detail what part of the curriculum of a secondary school should be completed in the fourth form for the purpose of admission to the craftsman's course. Submitted that the Director of Industries may be asked to do this. The curriculum that he may draw up, if approved, may be added to the Code as an appendix.

The Director of Public Instruction also raises the question what kind of drawing is to be taught for the industrial pupils, whether free hand or geometrical. With reference to this it is submitted that in the general education course the Director of Industries apparently refers to free-hand drawing; for, in the industrial school course he proposes "technical" drawing as one of the subjects in the course and apparently this means "geometrical and machine drawing." Perhaps it may be better to include this in the reference proposed above.

C.R.—11-10-15.

May be included as part of a general reference with which the revised Code may be sent to the Director.

C.G.T—13-10-15.

The draft above as amended may be substituted, omitting the last two sentences.

C.G.T.—19-10-15.

"25. *Practical technical education.*—The qualifications demanded of all practical "industrial workers are of two kinds—

"(1) skill;

"(2) ability to apply skill commercially;

"and a course of practical instruction may, like the course of general education, be "divided into two parts, the first having for its object the development of skill, the "second the practical application of the skill acquired. These two parts, which may "be termed the 'practice' and 'workshop' sections, are perfectly distinct in aim "and character and are controlled by the Director of Industries."

Office Note.

22. This paragraph may be accepted but the words "like the course of general education" may be omitted as unnecessary and misleading.

Secretary's Note.

I agree.

P. RAJAGOPALA ACHARIYAR—4-7-15.

For the latter part of the clause may be substituted—

"and the course of practical instruction will be divided into two parts, the first having for its object the development of skill, the second the practical application of the skill acquired. These two parts will be termed the 'practice' and the 'workshop' stage, respectively."

C.G.T.—13-10-15.

164, Home (Edn).—9

"26. *Theoretical technical education.*—Theoretical instruction is provided only "in connection with the craftsman's course of training [and is also controlled by the "Director of Industries].

"27. A complete course of industrial education consists of various combinations "of the above educational elements, and provides for the following:—

"*Journeyman's course.*

"General education		Lower (fourth standard) training.
"Technical education.	Practical	Lower (practice) plus higher (workshop) training.
	Theoretical ...	*Nil.*

"*Craftsman's course.*

"General education		Lower (fourth standard) plus higher (fourth form) training.
"Technical education.	Practical	Lower (practice) plus higher (workshop) training.
	Theoretical ...	Theoretical training."

"*Note.*—Wherever hereafter in this Code, the words 'practical' or 'theoretical' occur in connection with a course of instruction, it is implied, if not expressly stated, that they refer solely to technical education of an industrial character."

Office Note.

P.R.—4-7-15. | 23. There seems to be no objection to these two paragraphs

S.K.—15-6-15.

C.R.—20-6-15.

These paragraphs only repeat what has been said before and may be omitted from the abbreviated Code.

C. G. Todhunter—13-10-15.

"28. The general educational element is provided for in the Department of "Public Instruction. Strictly speaking, the practical element also should be omitted "from the scheme of training arranged by the Department of Industries. The natural "method of giving a pupil a practical education is to send him to a factory and make "him try and earn a living. Here his practical training consists, not of a definite "system of instruction, but of facilities for picking up information. [Only such "apprentices as possess the faculty of 'acquisitiveness' qualify as practical workmen, "but this faculty is considerably developed amongst the class of individual which in "Europe sets out to learn a trade. Further, the supply of raw material for training is "sufficiently great there to allow for the wastage inevitably associated with such a "system of natural selection and still furnish an adequate supply of trained labour. "Again the great development of industry in Europe furnishes adequate opportunities "for apprentice training in factories.

"In India the situation is entirely different. The faculty of 'acquisitiveness' "is not generally developed, the supply of raw material for training is limited and "factories are few, so that the opportunities for apprentice training are few also]. "The system of apprenticeship (which represents the natural system of training) will "be encouraged as far as possible, but it does not adequately meet Indian requirements "and must therefore be supplemented by an artificial system of training which may be "termed the industrial school system."

Office Note.

24 This paragraph contains much matter which may be removed as unsuitable for the purpose of the Code. The first sentence is unnecessary, as it is a repetition of what has already been stated in paragraph 24. The second is also needless. The portion from the fifth sentence downwards "Only such apprentices as possess the "faculty of 'acquisitiveness' qualify as practical . . . training are few "also", may perhaps be omitted also, as it is of the nature of a report. The *remaining* portions with a slight modification as shown below may be substituted for this paragraph:—

"The natural method of giving a pupil a practical education is to send him to a factory and make him try and earn a living. Here his practical training

consists not of a definite system of instruction, but of facilities for picking up information. This system of apprenticeships in workshops will therefore be encouraged as far as possible; and where it is not adequate it should be supplemented by an artificial system of training which may be termed 'the industrial school system'."

Secretary's Note.

I would rather make no change. There is no harm in the public knowing to some extent the *reasons* which have influenced us in framing the different rules.

P. Rajagopala Achariyar—4-7-15.

Further Office Note.

It is for consideration whether the draft rule suggested above may be approved. If this is considered as a declaration of policy, the whole of this paragraph may be omitted, the following being added to the next paragraph (29):—

"There are two systems by which practical training may be acquired, viz.: "the apprenticeship and the industrial school system. The former is preferable."

C.R.—11-10-15.

See next page.

C. G. Todhunter—13-10-15.

"29. The essential difference between the two systems is that industrial schools "provide practical training as part of the school curriculum whereas in the appren- "tice system pupils receive their practical training outside the school in a convenient "factory or workshop."

Office Note.

25. Though this paragraph is a repetition, it may be retained as making the position clearer; but it may be added to the previous paragraph.

Secretary's Note.

I would leave it alone.

P.R.—4-7-15.

We may substitute for this and the previous paragraph—

"The practice and workshop stages may be completed either as an apprentice in a factory or in an industrial school. The former is preferable."

We want following this a rule showing the period to be covered by—

(1) the practice stage;
(2) the workshop stage; and
(3) the craftsman's course.

The qualifying term of apprenticeship might also be stated.

Following this again we might add, instead of rule 33—

"To provide specially for the case of pupils who have little or no general education, half-time courses may also be arranged, but this course is not recommended."

C.G.T.—13-10-15.

"30. As stated, the general educational element in the present scheme of in- "dustrial education is to be provided by the Department of Public Instruction. Under "the apprenticeship system the practical element also falls outside that part of the "scheme that the Department of Industries directly controls. To ensure the required "standard of attainment in these elements, whether for purposes of admission to the "Department of Industries courses or for purposes of certification, certain qualifica- "tions must be prescribed. So far as they relate to general education these quali- "fications have already been defined: of the practical capabilities of an individual "trained in an outside workshop, the journeyman's examination constitutes the test."

Office Note.

26. The first sentence of this paragraph may be omitted as being a repetition.

Though the succeeding sentences are also open to similar objection, there seems no harm in retaining them as they serve to balance so far as regards the apprentice system what is said in the next paragraph about the industrial school system.

Secretary's Note.

I would retain the whole of paragraph 30.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

It is submitted that the whole of this paragraph may be omitted as it is redundant and also of a descriptive character.

C.R.—11-10-15.

"31. In the industrial school system, there are three component stages in the "complete higher (craftsman's) course of training, the completion of each component "stage being marked by a certificate. The lower (journeyman's) course includes only "the first two components. These component stages and certificates are as follows: "The practice stage of practical training completed by the Industrial School-leaving "certificate, the workshop stage of practical training completed by the journeyman's "certificate and the stage of theoretical training completed by the craftsman's certi-"ficate.

"Promotion from the practice to the workshop stage can only be made when a "pupil has secured an Industrial School-leaving certificate [the educational qualifica-"tion for which is the Lower Elementary certificate], and pupils will only be admitted "to the theoretical stage when they [hold the craft qualification certificate (fourth "form) and] also possess or are under training for the journeyman's certificate."

Office Note.

P.R—4-7-15. | 27. This paragraph does not seem objectionable and may be accepted.

S.K.—15-6-15.

C.R.—20-6-15.

"32. In the apprentice system, practical training (the journeyman's course) is "not included in the scheme of instruction. There is accordingly only one course "and consequently only one certificate: the craftsman's certificate.

"The departmental examination held on the completion of the practical "(journeyman's) course is however open also to apprentices who have not been "trained in an industrial school provided that they have put in a full-time period of "apprenticeship (Part III, paragraph 29) in a regular factory or workshop."

Office Note.

28. The first sentence of this already occurs in paragraph 29 and accordingly the words "practical training (the journeyman's course) is not included in the scheme of instruction" may be omitted and the other sentence in this sub-paragraph may run as follows:—

"In the apprentice system, there is only one course and consequently only one certificate: the craftsman's certificate."

The other portion of this paragraph seems alright.

Secretary's Note.

I would make no change.

P.R.—4-7-15.

Rules 30, 31 and 32 are very confusing, especially the proposal to grant an "industrial school leaving certificate" in the middle of the course and the distinction that is apparently drawn between the "practical (journeyman's) course" and the "practice stage". I would endeavour to straighten them out as follows:—

At the close of the practice stage an examination entitled the practice stage examination will be held at every industrial school and no pupil will be allowed to proceed to the workshop stage until he has passed this test in addition to producing the certificate of general education required by rule— .

At the close of the workshop stage there will be held an examination entitled the journeyman's examination and no pupil at an industrial school will be allowed to proceed to the craftsman's course until he has passed this test in addition to producing the certificate of general education required by rule— .

Apprentices are not admitted to the practice stage examination, but apprentices who wish to proceed to the craftsman's course may be admittedto the Journeyman's examination at any school under departmental management on producing a certificate of general education of the kind required by rule—for admission to the craftsman's course.

A certificate entitled the journeyman's certificate will be given to all persons who pass the journeyman's examination.

At the close of the craftsman's course a further examination will be held entitled the craftsman's examination. All persons passing this examination will be given a certificate entitled the craftsman's certificate.

C. G. TODHUNTER—13-10-15.

"33. The two courses above defined, viz., the journeyman's and craftsman's "courses, represent the regular or complete courses of industrial education provided "by the Department of Industries. One or two features of these courses deserve "remark:—

'The fundamental principle, for instance, that workshop training is to be conducted on 'business lines absolutely precludes an apprentice from continuing his general education after 'he has once entered the workshop. He may brush up his knowledge in special evening classes, 'but he has no time during the day to improve his general standard of education. It follows 'therefore that a pupil must at the time of obtaining his Industrial School-leaving certificate 'have carried his general education as far as he is ever going to take it.

'The application of the further principle that both general literary and industrial edu-'cation should be continuous from start to finish introduces other limitations. To provide for 'the continuation of a pupil's general education during the earlier stages of his industrial 'course the 'practice' stage may be taken either as a full-time course for two years, a half-'time course for four years or any equivalent combination. If any portion is half-time, the 'other half of his time is available for general education or any other purpose. If a pupil is 'entered as a full-timer at the beginning, his general education is interrupted and finished for 'good. But in the best possible case, by entering as a half-timer, he gets four years half-time 'in which to complete his education. This period allows him time to rise from the fourth 'standard to the fourth form by the abbreviated course, but that is the maximum possible and 'it therefore follows that unless a pupil has already reached at least the fourth standard before 'admission to the industrial school he cannot possibly qualify as a craftsman. It is important 'for school managers to bear in mind the importance of securing the highest possible standard 'of general education before admission, if the higher kind of training is to be attempted.

'It is further to be noted that the craftsman's certificate constitutes a dual qualification '—theoretical and practical. The two courses may be taken independently subject to the 'condition that no certificate will be awarded for a theoretical course unless the candidate has 'also satisfied the examiner on the practical side.'

Office Note.

29. The main object of this paragraph is to exhort managers to choose candidates who have already received the highest general education qualification necessary, as during the course of practical training it may not be possible to find time for such instruction. The other matters in

A very necessary exhortation.
P.R.—4-7-15.

this paragraph are already elsewhere referred to. It is submitted that the following may be substituted for this paragraph as giving the substance of what is aimed at :—

A | "The rigour of workshop training may not admit of a pupil's continuing his general education after he has once entered that course. In the practice stage also, unless he is a half-timer, he will be confronted with similar difficulty. It is therefore necessary for school managers to bear in mind the importance of securing the highest possible standard of general education before admission especially if the higher kind of training is to be attempted, and it is also obvious that unless a pupil has already reached at least the fourth standard before admission to the industrial school he cannot possibly qualify as a craftsman."

Secretary's Note.

I would make no change.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

The pith of this, viz., the exhortation to admit pupils with the highest educational qualification, has been incorporated in the revised paragraph 24. There is, however, no objection in retaining the modified form above A. It explains the reasons for the exhortations.

C.R.—11-10-15.

See note on page 35 *ante*

C. G. TODHUNTER—13-10-15.

"34. In addition to the regular or complete courses of industrial education the "scheme defined in this Code also provides for special classes: classes that form no "part of a regular course of instruction, to which admission is unrestricted and for "which no certificates are awarded. These special classes are arranged as required "and are more fully described in Part III of this Code."

Office Note.

P.R.—4-7-15. | 30. There is no objection to this paragraph.

S.K.—15-6-15.

C.R.—20-6-15.

PART I

CHAPTER IV.—INDUSTRIAL INSTITUTIONS.

"35. Industrial institutions providing regular or complete courses of industrial "education are of three kinds—

"(i) Government trade schools.

"(ii) Government industrial schools leased to private bodies for working.

"(iii) Private industrial schools.

"Besides which there are non-classified schools providing only special courses of "instruction.

"Since leased Government schools are identical in every respect except owner-"ship with private schools the two may be treated as one class."

Office Note.

31. In this classification, Mr. Tressler has only taken into consideration those institutions which are already in existence or about the starting of which *he* has some idea. He has entirely omitted to take account of those which are likely to crop up in the near future. For instance, there are some proposals from certain local bodies, e.g., Negapatam, to start industrial schools under their management. Such institutions will not find any possibility of classification here. It is therefore submitted that

some heading should be opened to include them also; schools under the management of the Government or local bodies may form one class. It may be noted here that paragraph 40 of Part II of the Code refers to schools under *public* management, i.e., under the management of the Government or local bodies.

The classification "Government trade schools", by which are referred only those which provide theoretical training for the "craftsman's" course, is none the least exhaustive of all *Government* industrial schools. In opening this classification Mr. Tressler had before him the proposed Government Madras Trades school, which is intended to train apprentices. He has not taken into account the Madura Technical school and the Cocanada Mechanical Engineering school, which are to be managed by the Government. These schools will not follow purely the apprentice system as by their situation they cannot command private workshops to give practical training to apprentices and as, in consequence of this, separate workshops will be attached to the schools themselves.

A | Further there seems to be no necessity to open any separate heading for "Government Industrial schools leased to private bodies for working." This distinction is not with any significance. At the close of this paragraph it is clearly stated that leased Government schools are identical with private schools; and in paragraph 43 "leased and private-owned" schools are classed as one; and nowhere else in the Code is the distinction maintained. There is therefore no object in opening a separate heading for them. It may signify the policy of the Government in furthering industrial education, but the Code does not seem to be the place for its declaration.

In these circumstances it is submitted that the classification may be as follows:—

(1) Trade schools	... ...	(*a*) Under the management of the Government or local bodies. (*b*) Under private management.
(2) Industrial schools	... ...	(*a*) Under the management of the Government or local bodies (*b*) Under private management.

If this is approved, the following further alterations may be made in the wording of the Code:—

(*a*) The words "complete" in the first line may be omitted;
(*b*) "Two" may be substituted for "three";
(*c*) The last sentence may also be omitted.

Secretary's Note.

The above criticisms on paragraph 35 should be put to Mr. Tressler and his remarks invited.

P. RAJAGOPALA ACHARIYAR—4-7-15.

[Paragraph 2 of demi-official No. 744-1, Educational, dated 9th July 1915.]

"36. *Government Trade schools.*—The system of training followed is the "apprentice system".

Office Note.

32. The word "Government" in this heading may be dropped, so that the rule may apply to similar schools under other managements also.

Secretary's Note.

This point may also be included in the reference to Mr. Tressler.

P.R.—4-7-15.

[Paragraph 2 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

Paragraphs 35 *and* 36.—Schools established by local bodies are, as observed, omitted in the classification and it is not quite clear to me whether they ought to be put in. A trade school is really extension class where no manufacture is undertaken. An Industrial school is one in which manufacture is done. I do not think that local bodies or private schools ought to be allowed to undertake trade instruction. In any case, I should bar private schools providing trade instruction. As to local bodies, whether they ought to be allowed to open trade schools or not depends on whether they can be relied on to carry out the spirit of our policy or not. I rather doubt if they can but am open to conviction on the point and if Government consider that local bodies ought to be allowed to open trade schools, the proposed classification may stand except that there should be no provision for trade schools under private management.

It is rightly remarked that the Madura Technical school does not fall under this head but the Madura Technical school is or is going to be a technological institution and therefore falls under that class.

Why I differentiate between a Government Trade school leased to private bodies and a private industrial school is that the one is owned by Government and the other is not. I am of opinion that this distinction is sufficient to warrant special classification.

Further Office Note.

Please see notes on pages 38 and 39 ante.

Trade Schools.—Mr. Tressler's reason as to why local bodies and private agencies should not be permitted to establish trade schools, viz., that they cannot be relied upon to carry out the spirit of the policy of the department is not very clear. The principal feature of *trade* schools is that pupils belonging to them will acquire practical training in an outside workshop or factory as apprentices in those factories while receiving theoretical instruction in the school itself. The proposed Madras Trades school is to have its students apprenticed only to firms and workshops under private management. It may not be impossible for local bodies and private agencies also to make similar arrangements with private factory owners and establish trade classes. This question has apparently to be settled in view of possible developments. It is therefore for orders whether Mr. Tressler's classification of trade schools should be modified as proposed.

Industrial schools.—As regards these it is submitted that Mr. Tressler's classification does not provide for such schools maintained by the Government or local bodies. In his reply to the reference, he does not say anything about *industrial* schools managed by local bodies. It is very likely that such schools will sooner or later come into existence; and he has no specific objection to urge against these bodies maintaining the institutions.

Mr. Tressler does not also say definitely whether there will not be *industrial* schools managed by the Government. Two schools, viz., the Madura Institute and the proposed Mechanical Engineering school at Cocanada were cited as examples of Government Industrial schools. In his reply he does not refer to the Cocanada school. Apparently as stated by him elsewhere he anticipates the establishment of a school at Cocanada by some *private* agency. But as regards the Madura institute, the only Government institution in the mufassal, he states that this is, or is going to be a technological institution. It is submitted that this statement is not altogether consistent with what has been stated in other places in the Code and in the Government Orders sanctioning the reorganization of the institute. Paragraph 11 of Part I of the Code states that no technological education will be undertaken by the Department of Industries except with regard to dyeing and leather industry. Of these, the Leather school is located at Madras. As regards dyeing the Government sanctioned the establishment of classes in the Madura Institute under Dr. Marsden. But recently Mr. Tressler has stated that the classes in Madura did not attract

G.O. 647, 18th July 1912.

G.O. 725, 8th August 1913.

Paragraph 4 of G.O. 725, 8th August 1913.

students and that therefore they should be opened at Madras. Mr. Tressler has also suggested that in Madura *industrial* classes in dyeing need alone be opened. If these proposals are approved neither of the technological classes in dyeing and leather industry will be located in Madura. Further, according to the orders issued in G.O. No. 647, Educational, dated the 18th July 1912 and No. 725, Educational, dated the 8th August 1913, the institute at Madura when reorganized will provide instruction in weaving, dyeing, mechanical engineering, carpentry and smithy in the industrial grade, i.e., of the elementary type. It is not therefore clear why Mr. Tressler states that the institute is to be only a technological school. According to him a technological institution should be of the type of the Victoria Technical Institute, Bombay. He himself has pointed out at the establishment of such an institution in this Presidency would be a very costly business and that therefore students who wish to undergo higher training should be sent to the Bombay institute. It may therefore be assumed that there is no near prospect of developing the Madura institute into a technological institution. The Madura institute will therefore be mainly an *industrial* school. In these circumstances it appears to be necessary to include *industrial* schools managed by Government also in the classification in paragraph 35 of the Code.

It is also for orders whether the *classification* "Government industrial schools leased to private bodies for working" should be retained. Please see note at **A** on page 39 ante. The fact that the Government own the building does not admittedly alter the character and working of the institution so far as the Code is concerned.

C.R.—11-10-15.

Chapter IV may be cut out bodily. It fulfils no essential purpose of a Code and consists largely of an attempt to classify institutions some of which have not yet been sanctioned while others have not yet come into existence. The proposed Madras Trade school, which apparently forms the basis of the main portion of this chapter, is still under consideration. The scheme of leasing out Government Industrial schools to private bodies still remains undecided.

Nor is the attempt at classification by any means successful. It assumes that Trade schools will all be Government institutions and attempts without any apparent reason to separate Government Industrial schools which are leased to private bodies from schools which are the property of such bodies. The bulk of the matter is covered by other portions of the Code. Clauses (*c*) and (*d*) of paragraph 38 are possible exceptions. They can be dealt with under Part II.

C. G. Todhunter—25-10-15.

"37. *Regular courses.*—The only course of instruction ordinarily provided in a "trade school in connection with the regular courses of industrial education is the "course of theoretical training forming part of the craftsman's course. These "theoretical courses are shown in Part III, paragraph 29."

Office Note.

P.R.—4-7-15. | 33. There seems to be no objection to this paragraph.

S.K.—15-6-15.

C.R.—20-6-15.

"38. *Admission.*—The conditions for admission are as follows:—

"(*a*) Pupils from Industrial schools who wish to attend a course of theoretical "training must apply to the Inspector and produce an Industrial School-leaving certifi- "cate. The Inspector will then try to arrange for their apprenticeship for the time "that they are undergoing instruction and if this is possible the pupils will be "admitted.

"(*b*) Candidates who have not studied in Industrial schools must produce a "certificate from an employer stating that they are actually engaged in the trade in "which they desire instruction.

"(*c*) Candidates must not be under 16 years of age.

"(*d*) Candidates must produce a letter of recommendation from the manager "of the Industrial school last attended, or from their present employers.

"(*e*) Candidates must adduce evidence to show that they have attained at least "the fourth form standard of general education. If even so, their literary attainments "are found to be deficient they may be required to attend a course of general instruc- "tion up to that standard before admission to the theoretical course."

Office Note.

34. The rules herein have been framed only in regard to *Government* schools. They do not seem to be open to any objection and also appear to be applicable to schools under local or private managements also. In clause (*a*) the word "Inspector" is used to render the rule applicable to Government schools only. In order to extend its application it seems better to substitute the word "management" for it. With this modification this paragraph may be approved.

Secretary's Note.

I would ask Mr. Tressler about this.

P. Rajagopala Achariyar—4-7-15.

[Paragraph 3 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

38. The modification is accepted.

"39. *Fees and Stipends.*—In the first instance no fees will be levied for the "theoretical course. Except in the eventuality mentioned in Part III, paragraph 14, "no stipends will be awarded by Government."

Office Note.

35. The statement in this paragraph that no fees will be levied from the pupils is apparently based on the orders in the case of the Madura Technical Institute where it has been decided that no fees for *industrial* classes as distinguished from technical classes are to be levied. In the case of the North Madras Technical school * no fees are to be levied. There seems therefore to be no objection to the retention of this sentence; but it may be limited to schools under Government management as it is proposed to make the paragraphs in this chapter applicable generally to all schools.

G.O. 647, Educational, 18th July 1912.

* Only an admission fee is to be levied—paragraph 9 of Committee's report.

P.R.—4-7-15.

The answer of Mr. Tressler to the reference at page 31 would settle this.

P.R.—4-7-15.

As regards the question of stipends it was originally decided in connection with the Madura Technical Institute that in order to induce students to join industrial classes some stipend should be awarded. In the case of the North Madras Technical school a similar decision was also come to; but subsequently on the representation of labour employers this form of inducement was replaced by partial free boarding and lodging, only a proportionate recovery from their earnings being made. All these proposals were considered by the conference which was convened to work out details in regard to the North Madras Technical school. After discussion the conference has recommended that neither stipends nor hostel accommodation should be granted but that scholarships alone should be awarded in deserving cases. The statement in this paragraph follows the above recommendation. There seems to be no objection to accept this recommendation for the present. If any alteration in this decision is considered necessary later on, it may be introduced.

Paragraph 7, page 34 of G.O. 647, Educational, 18th July 1912.

Please see Mr. Tressler's letter on pages 2 to 4 of G.O. 780, Educational, 4th July 1914.

P.R.—4-7-15.

Quite so.

P.R.—4-7-15.

If the above is approved, the words "in schools under the management of Government" may be introduced at the close of the first sentence of this paragraph.

"40. *Scholarships.*—Specially deserving candidates who would without financial "assistance be unable to continue their practical training may, on the recommendation "of their employers and at the discretion of the Director of Industries, be given "scholarships of the value of Rs. 5 per mensem.

"Forms of application for admission to trade schools (Appendix XXI) and "for scholarships (Appendix XXV) may be obtained on application to the In- "spector of Industrial schools. Applications for scholarships must be received duly "filled up before 1st April of each year and for admission to the school before 1st "May.

"The number of scholarships available will be notified about the middle of March "in the *Fort St. George Gazette*. Scholarships will be awarded by the Inspector of "Industrial schools on the merits of the applicants."

Office Note.

36. The only alterations that seem to be needed in this paragraph is the insertion of the word "*Government*" before "trade schools" in the second sub-paragraph, as the application form for *other* trade schools, if they are established, need not be supplied by the Inspector of Industrial schools.

P.R.—4-7-15.

As regards the value of the scholarship which is proposed to be fixed at Rs. 5, it is submitted that according to the present scholarships notification for industrial schools the rate varies from Rs. 1-8-0 in standard C to Rs. 9 in the advanced course. As these classifications of periods of training will now be replaced by new ones, there seems to be no objection to accepting the rate of Rs 5 for trade school scholarships. The notification will eventually have to be revised with reference to the decisions in connection with the code.

P.R.—4-7-15.

Yes

P.R.—4-7-15.

Further Office Note.

Perhaps the words "of the value of Rs. 5 per mensem" at the end of the first sub-paragraph may be omitted. At present, the number and value of scholarships tenable in industrial schools are notified in the *Fort St. George Gazette* as is the case with scholarships tenable in ordinary non-industrial schools. In the code, Mr. Tressler has proposed a new scheme of scholarships for trade schools and for industrial schools. His Excellency the Governor has directed that every reference to proposals which have not yet received the approval of Government should be omitted from the code. Reference to the new scheme of scholarships may therefore be omitted. If the new courses of studies outlined in the code are approved, Mr. Tressler may be asked to submit separately proposals for the modification of the existing scheme of scholarships. As at present, the scholarship notification published every year may give particulars about the scholarships available in industrial and trade schools. It need not be embodied in the code. The Madras Educational Rules do not furnish particulars about the number and value of scholarships available in the schools coming under the purview of those rules.

C R.—11-10-15.

"41. *Examination.*—At the end of each course a written and oral examination "will be held covering the ground defined in the syllabus. No (craftsman's) certificate "will however be awarded unless candidates also hold or obtain a journeyman's "certificate."

Office Note.

37. The second sentence of this paragraph already occurs in paragraphs 30 and 31 of this part. It is therefore unnecessary here.

Secretary's Note.

I see no harm in the repetition.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

If the suggestion to delete paragraph 30 is approved, the second sentence in the above paragraph may perhaps be retained.

C.R.—11-10-15.

" 42. *Special classes.*—In addition to the regular courses of instruction popular " lectures or special classes for artisans will also be provided as required (*vide* " Part III)."

Office Note.

38. This also seems needless as the same has been stated in paragraph 34.

Secretary's Note.

I would leave it alone.

P. RAJAGOPALA ACHARIYAR—4-7-15.

" 43. *Industrial schools (leased or private-owned).*—The training in these schools " will usually be on the 'Industrial school system,' but managers may, with the previ- " ous sanction of the Director of Industries, admit apprentices direct to the workshop " section of certain branches.

" The general rules applying to these schools are laid down in the next part."

Office Note.

39. The words " leased or private owned " may be omitted, so that this paragraph may be applicable to State and local bodies schools also.

It depends on Mr. Tressler's answer to the reference proposed at page 38.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

PART II—INDUSTRIAL EDUCATION

Conditions for State Aid to Private Institutions.

Office Note.

40. This part contains specific rules relating to the organization, recognition and aid to industrial schools and accordingly takes the place, so far as these schools are concerned, of the Madras Educational Rules and the Grant-in-Aid Code. As has already been pointed out, the arrangement of matter in this part does not seem to be all that can be desired. The portions relating to the conditions under which grants should be paid and the basis on which they should be calculated should ordinarily be kept distinctly separate from the rules relating to recognition and other matters connected with the working of the schools which have their counterpart in the Madras Educational Rules. Without largely dislocating the arrangement it may be better if chapters I and V of this part are kept together and taken to the end of the part, the remaining chapters II, III and IV forming together the earlier portion of it.

I would rather make no change.

P.R.—4-7-15.

The Educational Rules and the Grant-in-Aid Code, so far as they relate to secondary schools, have been adopted in the present code for industrial schools. There seems to be no objection to this course. Mr. Tressler has however used for this purpose the old editions of the Educational Rules and the Grant-in-Aid Code, which do not embody subsequent amendments thereof. In dealing with the individual chapters below, it will be indicated where the modified rules have to be adopted. Mr. Tressler has also left out all provisions for the payment of grants in respect of endowments and gymnasia and games. It will be pointed out in the appropriate places below how far provision for these is also necessary in the Code.

Chapters II, III and IV will be taken up first for examination and then chapters I and V.

S.K.—15-6-15.

C.R.—20-6-15.

The proposal that the portion borrowed from the Educational Rules, as to the establishment of schools, should precede the portion from the Grant-in-Aid Code seems to be sound. But I don't see the use of borrowing chapters bodily and then making trifling and unnecessary changes. I would acknowledge the borrowing and emphasise the essential differences. For instance I would commence chapter II with " The general rules governing industrial schools are the Educational Rules for secondary schools for boys which are reproduced with some slight modifications below. The changes are shown in italics."

C. G. TODHUNTER—25-10-15.

PART II

CHAPTER II.—GENERAL RULES FOR INDUSTRIAL SCHOOLS.

" 12. The recognition of industrial schools shall vest in the Director who " shall, before according recognition, satisfy himself as to, besides the other matters " specified in this chapter, the following :—

" (*a*) The character of the teaching, the organization and development of " the school.

" (*b*) The educational needs of the locality.

" (*c*) The financial stability of the school.

" (*d*) The constitution of the managing body.

" (*e*) The scale of fees charged as compared with those charged in other " institutions in the same locality.

" 13. *Proportion of intructors to pupils.*—There should be an instructor for every " subject taught in the practice stage and another instructor, ranking as a foreman for " each subject taught in the workshop stage."

Office Note.

41. The former follows rule 22 of the Madras Educational Rules; but the latter is new. There seems to be no objection to these.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

" 14. In the practice stage if the number of pupils on the rolls for any " subject exceeds 30, the subject must be divided into sections, each in charge of an " instructor. If the number again exceed 30 a further sub-division must be made.

" In theoretical classes the numerical limit is 20."

Office Note.

42. Ordinarily the numerical limit of pupils is placed with reference to each class. Here, however, the subject is mentioned. It is not known whether within the limit specified here one instructor can have under him number of students of various grades such as practice, workshop, theoretical, etc., though under the same subject. As the qualifications of teachers are separate with respect to each of these grades it is

not likely that the above would have been intended. If not there seems to be no objection to substitute the word "class" for "subject." In each grade there must be different classes according as they are of the first, second or third year in their course. In order to avoid any ambiguity it seems better to specify on what basis the numerical limit is intended to be fixed.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

I would leave it alone.

P. RAJAGOPALA ACHARIYAR—4-7-15.

See page 52. Rules 13 and 14 seem to belong to "organization."

C. G. TODHUNTER—25-10-15.

"15. *Site, plan and accommodation.*—No school shall be recognized which is "held in a building or buildings of which the site, plan and accommodation have not "been approved by the Director. When the accommodation is added to, the plan of "the additional building must be submitted for the approval of the same authority.

"The plans for all machinery or plant to be permanently erected shall similarly "be submitted for approval.

"16. The plan of a school building and of any additions to such building shall "give full information regarding the superficial and cubic space of the building and "of each room in it. It shall also show the exact positions of doors, windows, stairs, "etc. The plan shall be certified correct by the person who has prepared it. The "plan of an old building submitted for purposes of recognition shall also be accom-"panied by a certificate from the person who has prepared it to the effect that the "building is in a state of good repair.

"17. The plan may be prepared by any competent person. Managers who "require the services of an officer of the Public Works Department should apply to "the Executive Engineer of the district, or, in the Presidency town, to the Consult-"ing Architect [*Note A, page* 82]."

Office Note.

43. These follow rules 30 to 32 of the Madras Educational Rules. In G.O. No. 371, Educational, dated the 2nd April 1914, some verbal alterations were introduced in these rules. They are—

(i) the substitution of the words "dimensional sketch" for the word "plan" where it first occurs in these rules and the word "sketch" wherever it appears subsequently;

(ii) the replacement of the word "require" by "desire" in rule 17; and

(iii) the omission of the words "district, or, in the Presidency town, to the "Consulting Architect" and the introduction of the word "division" in their place.

These alterations were introduced in connection with some difficulties which arose in the working of the rules. It was found that the word "plans" was frequently taken to mean "elaborate designs, etc.," while what was actually required for the purpose of recognition was only a rough sketch. The other alterations were also needed for obvious reasons. It is submitted that these alterations may be introduced in the above paragraphs of the Code.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15

"18. *Dimensions of buildings.*—The dimensions of the buildings shall be such as "to provide at least 8 square feet of area and 80 cubic feet of space for each pupil on "the rolls. In calculating the dimensions of buildings under this rule, verandahs "which are solidly constructed and on which class rooms open may be included.

"19. If any school has a dormitory intended for the accommodation of ten or more "pupils attached to it, the dimensions of such dormitory shall be such as to provide "at least 30 superficial feet and 400 cubic feet for each pupil. In the case of dormi-"tories intended for less than ten pupils a proportionate increase in superficial and "cubic space for every inmate less than ten up to at least 80 superficial feet and 960 "cubic feet for a single pupil shall be provided.

"20. *Sanitary inspection.*—Every school building shall be maintained in "substantial repair and in a cleanly condition. It shall be subject to inspection by "the departmental inspecting officer, and such officers of the Medical, Sanitary and "Engineering Departments as Government may direct.

"21. The following sanitary certificates shall be produced before recognition is "accorded and on any subsequent occasion if called for: in the Presidency town a "certificate signed by the Sanitary Commissioner, the Deputy Sanitary Commissioner, "a District Surgeon, or the Health Officer of the municipality: in the mufassal a "certificate signed by the District Medical Officer or, if satisfactory reasons are "given, by a subordinate Medical Officer [*Note O, page* 83].

"22. *Overcrowding of class-rooms.*—No class-room, laboratory, or workshop "shall be permanently used as such by a larger number of pupils than the Inspector "or Sanitary Officer has declared it sufficient to accommodate. The dimensions of "each room shall be clearly indicated on the wall thereof.

"23. *Latrine.*—Every school shall be provided with a suitable latrine.

"24. *Protection from small-pox.*—The presence of pupils unprotected from "small-pox may be regarded as a sufficient cause for withdrawal of recognition.

"25. *Furniture, Apparatus and Appliances.*—Every school shall be provided "with the furniture, apparatus and appliances declared by the inspecting officer to "be necessary for the standard of instruction up to which it teaches."

Office Note.

44. These are exact reproductions of rules 33 (i), 33 (ii), 34, 35, 36, 37, 37 (A) and 38 of the Educational rules with the exception that in paragraph 25 the words "and with the gymnastic apparatus prescribed in Appendix J" have been omitted. Mr. Tressler apparently does not consider it necessary that industrial schools which in most cases include within their working manual labour also should compulsorily provide for gymnasia and games. Though there may be some schools in which theory alone is taught, yet the students attending those classes will be mostly apprentices who will be attached to workshops. Compulsory provision of gymnasium does not therefore seem to be necessary, and schools may be left to provide or not for it as they choose. In this view the paragraphs above indicated may be accepted.

Cf. Rule 38 of Madras Educational Rules.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

"26. For every payment of fees a pupil shall receive a receipt signed and dated "by the manager or some one deputed by him. The receipt should show the class in "which the pupil is reading."

Office Note.

45. This follows rule 42 of the Educational Rules and may be accepted.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

"27. *Admission and withdrawal of pupils.*—No pupil who has previously studied "in any recognized industrial school shall be admitted to another industrial school, "unless he presents a transfer certificate in the prescribed form (Appendix I) from "that school. No pupil shall be allowed to attend school pending formal admission

"or enrolment, and no pupil shall be admitted or enrolled pending the production of "an industrial school transfer certificate if due. [If the pupil is alleged not to have "attended any industrial school previously, an ordinary school transfer certificate may "be accepted: if he is alleged not to have attended any school at all, the manager of "the industrial school must prepare a declaration stating that, to the best of his "knowledge, the pupil has received no previous education of any kind]. All transfer "certificates and declarations shall be endorsed with the admission number under "which the pupil is enrolled. They shall be separately filed and shall be shown to "the inspecting officer when required."

Office Note.

P.R.—4-7-15.

46. This paragraph with the exception of the portion enclosed in brackets is almost the same as rule 44 of the Educational Rules. There seems to be no objection to this paragraph so far as it goes.

It is, however, submitted that no provision is made for prescribing a formal application for admission newly into an industrial school similar to the one in rule 43 of the Educational Rules. The paragraph above (27) lays down that in such cases an ordinary school transfer certificate may be accepted, but there should be an application from the candidate for admission into the school or from his parent or guardian preferably the latter as the minimum age of the pupils seeking admission into industrial classes is ten. In this connection it is noted that in the case of technological courses, trade school and normal training school such applications are prescribed. Please see paragraphs 18 and 40 of Part I, paragraph 43 of Part III, and Appendices XX to XXII. If approved, the following may be introduced as a new paragraph above paragraph 27 or added as the first portion of it:—

Paragraph 47 of Part II of the Code, page 21.

Pages 5, 12 and 45 of the Code.

P.R.—4-7-15.

"No pupil shall be newly admitted in any industrial school except on an application in the prescribed form signed by his parent or guardian and, if he is a major, by himself."

S.K.—15-6-15.

C.R.—20-6-15.

I would add, as in the Educational Rules,—"all such letters of application shall be filed separately in the records of the school."

C. G. Todhunter—25-10-15.

"28. If a pupil is permitted to enter the workshop direct, without previous "industrial training, the sanctioning order (chapter III, paragraph 49) must be filed "with the pupil's transfer certificate. Application for a transfer certificate shall be "made in writing by the parent or guardian of the pupil.

"29. The manager of the school into which a pupil seeks admission shall not "apply for a certificate to the manager of the school which such pupil is leaving, but "shall leave it to the parent or guardian of the pupil to apply for such certificate.

"30. The manager of the school into which a pupil is admitted shall place him "in the class for which he is found fit, subject to revision by the inspector.

"31. Before granting a transfer certificate the manager is entitled to claim the "term fee for one term only and that the term in which the last attendance of the "pupil is registered.

"32. If a pupil is found to have obtained admission by means of a false certifi-"cate or false representations of any kind, he shall be summarily dismissed with "forfeiture of whatever fees he may have paid."

Office Note.

P.R.—4-7-15.

47. These follow rules 45, 46, 47, 48 and 57 of the Madras Educational Rules respectively. These may be accepted.

In the Educational Rules there are some further elaborate rules regarding grant of transfer certificates, laying down detailed instructions as to the payment of fees, etc. It may not be necessary to insist on their being imported in the Industrial Code for the present and until the practical working demonstrates their necessity. It however seems desirable to introduce in the Industrial Code some such provision as in rule 56 of the Educational Rules. The latter rule runs as follows:—

E.g. rules 49, 50, 51 and 52 of the Madras Educational Rules.

In the event of the headmaster's refusing or delaying to give a transfer certificate, the parent or guardian of the pupil shall have the right of appeal to the inspector whose decision shall be final unless he thinks it necessary to refer the matter to the Director.

It is submitted that with the substitution of the word "manager" for "headmaster" the above rule may also be inserted in the Code.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

The first part of rule 28 is a repetition of chapter III, rule 49, and has nothing to do with the second part. It may be omitted.

Rule 30.—There is no reason given for omitting the second part of Educational rule 47, which may be included.

C. G. Todhunter—25-10-15.

"33. In the event of a pupil being formally expelled on account of grave mis-"conduct, the manager shall record his reasons for the dismissal or expulsion and "report the fact at once to the parent or guardian of the pupil and within seven days "to the inspector. A pupil thus dismissed or expelled from one school shall not be "admitted into any recognized school within a period to be determined by the Director "on the inspector's recommendation.

"34. When a pupil is dismissed or expelled the manager shall not grant a "transfer certificate until the expiration of the period for which the Director has "debarred the pupil from admission into a recognized school. After that period has "expired the transfer certificate shall be granted subject to the above rules; but in "such cases the headmaster shall endorse it with the words 'dismissed for false "representation,' or 'expelled for misconduct,' as the case may be.

"35. *Discipline.*—The rules of discipline shall include the following:—

"(*a*) Every pupil shall in the workshop and the class room wear a neat and "suitable dress and, in all cases where good manners require it, a suitable covering "for the head.

"(*b*) No pupil shall be allowed to sit in a class room with his shoes on, unless "they are shoes of an English pattern and unless socks and trousers are worn also. "But in plague-infected areas shoes of an English pattern together with socks may "be worn in class even if trousers are not worn.

"(*c*) Every pupil shall salute the instructors on the occasion of his first meeting "them for the day within the school precincts.

"(*d*) On the instructor's entering a class room the pupils shall rise and remain "standing till they are desired to sit or till the instructor takes his seat.

"(*e*) No pupil shall be allowed to leave the workshop or class room without "the permission of his instructor, or until work has been stopped."

Office Note.

P.R.—4-7-15.

48. These follow rules 53, 54 and 59 of the Educational Rules respectively and may be accepted.

S.K.—15-6-15.

C.R.—20-6-15.

164, Home (Edn.)—13

"36. *Registers and returns.*—Every school shall keep books in the prescribed "form and submit to the inspecting officer, when required, the following:—

"(1) A register of admissions and withdrawals (Appendices II and III).
"(2) Attendance registers for pupils (Appendix IV.)
"(3) A term fee register (Appendix V) (if fees are charged).
"(4) A time-table.
"(5) A register of attendance for staff (Appendix VI).
"(6) An acquittance roll (Appendix VII).
"(7) A log-book, being a record of all events of importance connected with "the school.
"(8) A register of scholarships (Appendix VIII).

"*Attendance registers.*—Separate registers shall be maintained in each subject as "follows:—

"(*a*) For pupils in the practice section. In this register "half" and "whole timers" "must be separated. Recognized and non-recognized pupils must also be differentiated.
"(*b*) For recognized apprentices in the workshop section.
"(*c*) For recognized apprentices attending the theoretical courses.
"(*d*) For paid workmen in the workshop.

"*Returns.*—Accounts for the workshop section must be kept entirely separate "from those for the rest of the school. For the school as a whole the following returns "are required:—

"(1) Schedule of stipends (Appendix IX).
"(2) Schedule of staff qualifications and pay [Appendices X (*a*) and X (*b*)].
"(3) Financial statement (Appendix XI).
"(4) Statistical return (Appendix XII).

"In the workshop section complete working accounts are to be maintained on "any commercial system approved by the Director.

"All returns must be submitted not later than April 15th."

Office Note.

49. The first portion of this follows rule 60 of the Educational Rules and the latter is special to industrial schools and therefore new. In the first portion provision for a visitors' book in each school has been left out. It seems desirable to insist on its being kept in industrial schools. While they are considered necessary in the case of the ordinary schools their necessity in the case of industrial schools is greater. If approved, a new item may be introduced as item (9)—

Please see note to rule 60 (i) of the Madras Educational Rules.

"A visitors' book" in which officials belonging to other departments and other visitors to the school may be invited to make remarks.

P.R.—4-7-15.

The latter portion of this paragraph is intended to ensure the maintenance of separate and correct accounts of workshop and the school proper. This has been urged by Mr. Tressler ever since he took charge of the department. Please see his notes on pages 14 and 15 of G.O. No. 833, Educational, dated the 16th July 1914. This paragraph may be approved.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

The Educational Rules should be followed strictly as far as they go. The paragraph regarding attendance registers may stand. The so-called returns are really accounts. I don't see the necessity for them. They are probably covered by the forms under the Madras Educational Rules. Workshop accounting is going to be part of the course of training and should be dealt with in its proper place.

C. G. Todhunter—25-10-15.

"37. *Withdrawal and renewal of recognition.*—When a school or any of its "classes has ceased to fulfil the conditions of recognition, or when the educa- "tional needs of the locality no longer require its existence, the Director shall "withdraw the privilege of recognition from that school or class..

"38. A school or class, from which the privilege of recognition has been with- "drawn, owing to its having ceased to fulfil the conditions, shall not be restored to that "privilege, until it has been certified by the inspector that the defects which led to "the withdrawal of recognition have been remedied, and that in all other respects the "school or class fulfils the prescribed conditions.

"39. If a recognized school ceases to exist or is transferred to a different locality "or different managing body its recognition lapses and for the purpose of future "recognition it shall be treated as a new school.

"40. Courses of instruction may be prescribed from time to time for all re- "cognized industrial schools, whether under public or private management."

Office Note.

50. These are adaptations of rules 63, 64, 65 and 67 of the Educational Rules. The only point that has to be noted in this connection is about the expression "public management" in paragraph 40. This is the first time this occurs in the Code. In the Educational Rules institutions under public management are defined as those under the management of the Government, local board or municipality. Mr. Tressler has, as already pointed out, not taken any consideration in this code of institutions under local boards and municipalities and no definition such as that which occurs in the Educational rules has been introduced here. It therefore seems better to substitute for the words "public or private management" the words "the management of the Government, local, or private bodies."

Rule 1 of the Madras Educational Rules.

Mr. Tressler may be asked about this.

P.R.—4-7-15.

S.K.—15-6-15.

C.K.—20-6-15.

[Paragraph 5 of Demi-Official, No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

40. The alteration may be made.

Secretary's Note.

Rules 61 and 62 of the Madras Educational Rules must be reproduced or else the reference to "any of its classes" in rule 37 above will be meaningless.

In rule 40 I would omit the words after "schools".

C. G. Todhunter—25-10-15.

PART II

Chapter III.—General Rules regarding Organization, Management and Staff.

"41. The organization of the school shall be as follows:—

"The institution shall be in charge of a manager who shall be an "individual of sufficient general education and administrative experience to "qualify for such a post.

"The management of the workshop shall be in the hands of a superin- "tendent who shall be an individual qualified by practical industrial experience "of modern manufacturing methods and a thorough practical knowledge of his "trade or craft.

A

"An adequate clerical staff is also to be maintained as prescribed by the "Inspector.

"Instructors shall be provided in the proportion laid down in Chapter II, "paragraphs 13 and 14 and must hold instructor's certificates of the required grade.

"42. When a superintendent possesses the dual qualifications necessary for "manager and superintendent, he shall be competent to exercise both functions, "and even when the two appointments are separated, the superintendent shall "have unhampered control of the practical side of the work." | A

Office Note.

51. The only point that needs notice in these paragraphs is the prescription of qualifications for the manager of an industrial school. It is unusual to prescribe qualifications for managers of schools and accordingly the Educational rules are silent on that point. In his original note Mr. Tressler stated that the manager should be a person competent to hold charge of the commercial side of the institution, to control accounts and to decide all business questions. Apparently Mr. Tressler refers in the code to a paid head of the whole institution and not to the "management" which may either be a body of persons like the local body or a private committee. If so, there seems to be no objection to the retention of these paragraphs.

Paragraph (8), page 15 of G.O. 833, Educational 16th July 1915.

May be retained.
P.R.—4-7-15.

There was a long discussion at the meeting of one of the committees as regards the relative position of the manager and the superintendent in an institution and the last sentence of paragraph 42 that "the superintendent shall have unhampered control of the practical side of the work" is the result. It was pointed out at the meeting by Mr. Tressler that the managers were responsible for the general control of the schools but were not entitled to interfere in the question of practical training of the students which was the province of the superintendents. It cannot even now be said whether there will not be a clash between these two officers. The rule may be allowed as it is for the present to be amended if necessity arises in the future.

P.R.—4-7-15.

Further Office Note.

It is not proposed to approve Mr. Tressler's proposal to establish a normal training school. As, according to his scheme, the instruction received in that school is the standard by which the grade of teacher will be determined, it is necessary to lay down some other standard for the teachers. Mr. Tressler has been asked to report whether a scheme of apprenticeship cannot be instituted. The reply to that reference may perhaps be awaited.

In the meanwhile it may perhaps be better to say that the "instructors must hold certificates approved by the Director."

C.R.—11-10-15.

Follow the Madras Educational Rules.—"The instructors should either be of "proved ability or should hold certificates approved by the Director."

"Without the sanction of the Director the strengh of a class in the workshop "section shall not continuously exceed 30, or 20 if it is a class for theoretical "instruction."

There should be one instructor for every class. Each instructor of a class in the practice stage should be assisted by a foreman.

The above may follow the portions marked **A**. I don't think it is necessary to make any rule about the clerical staff.

C. G. Todhunter—25-10-15.

"43. *Courses.*—The various courses of instruction are shown in Part III, "Chapter III. Drawing for a period of not more than three hours a week forms an "integral part of the practical course in the practice section and is not therefore "specifically mentioned."

Office Note.

52. This paragraph seems unnecessary here. The second sentence may be carried over to paragraph 29 of Part III which lays down the courses of studies.

Secretary's Note.

I would leave it alone.

P. Rajagopala Achariyar—4-7-15.

The office proposals may be accepted.

C. G. Todhunter—25-10-15.

"*Time (Practical course).*

"44. *Industrial school system.*—In the practice section a minimum of 16 hours "a week must be devoted to practical industrial work (including drawing). A pupil "devoting this minimum time to industrial work will be termed a 'half-timer.' "Pupils devoting a minimum of 32 hours weekly to industrial work will be termed "'full-timers.' To the practice section both half and full-timers may be admitted; "in the workshop section full time is compulsory but will include such time as may "be devoted to 'recognized' theoretical instruction.

"45. The full period of training in the practice section is two full-time years. "The period may however, at option, be lengthened to 4 half time-years or the "equivalent. The full period of training in the workshop section is given in Part "III—usually 3 years. Any proposed increase or decrease in the specified period of "training in the case of any pupil or apprentice must receive the sanction of the "Director of Industries. If such sanction is refused the pupil or apprentice may be "retained at option as a paid workman in the workshop, but he is not then 'recog-"nized' and his name may not be included in the official register of apprentices.

"46. *Apprentice system.*—Where schools are permitted to admit apprentices "direct into the workshop without previous school training, the period of training is "that specified in Part III, Chapter III, in connection with the apprentice system. "In this case apprentices must be full-timers."

Office Note.

53. Submitted that these paragraphs may be accepted. In his original note Mr. Tressler suggested 36 hours for a full-timer and 16 hours for half-timer. The period of training laid down here is also very nearly the same as that in the original note.

Paragraph (11), page 16 of G.O. 833, Educational, 16th July 1914.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

We agreed that the half-timer would take 11 years to complete his course. I don't think it is a practicable proposition. I would amend as below. This still allows the Director a lot of latitude.

Rule 44.—*For* 16 *substitute* 32 and omit all but the first sentence.

Rule 45.—*For* the first three sentences substitute:—

"The full period of training in the practice section is two years and in the workshop section usually three years" and omit "he is not then recognized and" in the last two lines.

Rule 46.—Omit the last sentence.

C.G.T.—25-10-15.

"*Conditions for Admission.*

"47. *Practical courses—Industrial school system—Practice section.*—The "minimum age for admission to industrial schools is 10 years.

"No educational qualification is prescribed for admission.

164, Home (Edn.)—14

"After the first year of training it will be possible to form a good idea of the "capacity of a pupil and whether he will be likely to shape well or become a f... "As an industrial school is not a refuge for the destitute or incapable, bu... "ground for efficient workmen, pupils who at the end of their fir... "prospect of becoming efficient workmen must be removed from the register.

"The practice section is intended primarily for the training of pupils wishing "to adopt an industrial career. The introduction into this section of pupils who do "not fulfil the half-time condition, or are undergoing training with an obviously "non-industrial object is viewed with disfavour, but will not for the present be "absolutely stopped provided that the Director's sanction is obtained for their admis-"sion and their names are entered in a separate register and entirely omitted from "all returns.

"The enumeration of such pupils as industrial will be regarded as a grave "breach of regulations involving the instant withdrawal of the privilege of the "admission of such pupils to the industrial classes."

Office Note.

54. As regards the minimum age for admission it has been fixed at 10. It is submitted that the full period of training in the practice section is two full-time years and four half-time years. In the next paragraph the minimum age for admission to the workshop section is laid down as 14 years; so a pupil who joins the industrial school at the age of 10, if he is a full-timer, will have to wait for additional two years though he might have completed his "practice" section; and the rule as it stands will only be fit for half-timers; entering the practice section at the age of 10 with a four years' half-time course they will be eligible for admission to the workshop section at the 14th year. Either the minimum age must be varied for full-timers or the minimum for workshop section must be lowered or the minimum for the practice section must be raised to 12 years. In his original note also the minimum age for the workshop section was suggested as 15 as it was thought that the boys should not work as operatives under factory conditions below that age. It may not therefore be possible to reduce the minimum age for workshop. Mr. Tressler may be asked to note further on this point.

Paragraph 45 of the Code, Part II.

Page 9 of G.O. 833, Educational, 16th July 1914.

Mr. Tressler may be asked about this.
P.R.—4-7-15.

A

I consider them necessary.
P.R.—4-7-15.

In the third sub-paragraph the first sentence and the first portion of the second sentence may be omitted as being unnecessary. The full force of what is intended is conveyed by the remaining words, namely, "pupils who at the end of their first year show no prospect of becoming efficient workmen must be removed from the register."

No change need be made here.
P.R.—4-7-15.

In the fourth sub-paragraph, third line, the words "at least" may be inserted between "who do not" and "fulfil the half-time condition"

Yes.
P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

[Paragraph 6 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

Paragraph 47.—My opinion is that pupils under the age of 14 should not do whole-time courses and therefore the minimum age for admission to the workshop has been fixed at 14. If a boy joins the practice section at the age of 10 he must

do half-time: if at 12 he does two half-time years and one full-time year, joining ...ctory at the age of 15, etc. I may not have made this clear and it might be
52. ... at the end of the paragraph:—
over to parag ...ils in the practice section may be put on to whole-time work until
"they reach the age of 14."

Further Office Note.

The addition suggested may be approved.

2. The alteration in the third sub-paragraph suggested at "A" above is also for orders.

C.R.—11-10-15.

I would say—

"The minimum age of admission to an industrial school is 12 years. No "educational qualification is prescribed for admission"

and omit the *brutum fulmen* which follows.

C. G. Todhunter—25-10-15.

"48. *Workshop section.*—The minimum age for admission into the workshop "section is 14 years.

"The qualification ordinarily prescribed for admission into the workshop section "is the industrial school-leaving certificate.

"Under the industrial school system, schools are at liberty to admit any pupil "satisfying the above qualifying conditions, but, without the special sanction of the "Inspector, no pupil who fails to satisfy those conditions shall be admitted to the "workshop section. The object of the education given in the workshop section is to "train workmen, not to provide a course of manual training for individuals intending "to qualify in some other direction. The introduction of pupils who are *primâ facie* "non-industrial or do not fulfil the whole-time conditions into the workshop, will be "regarded as a grave breach of regulations, involving the instant withdrawal of "recognition from the school."

Office Note.

I would leave it alone.
P.R.—4-7-15.

55. In the third sub-paragraph the portion from "Under the industrial school system" to "but" may be omitted as being unnecessary.

As regards the last portion of this paragraph laying down that the introduction of non-industrial pupils into the workshop would involve the withdrawal of recognition, it is submitted that objection was taken to it by the Hon'ble Mr. M. Ramachandra Rao at the meeting of the committee. In regard to the practice section, paragraph 47 allows the introduction of non-industrial pupils with the special sanction of the Director. Their absolute prohibition in the workshop section is stated by Mr. Tressler to be necessary to prevent the waste which would follow from industrial schools admitting and training pupils who had no intention of following industrial pursuits but took the course with some other object in view. It is not likely that persons would ever resort to workshop and seek training there for other than industrial objects and it will not be improbable that everybody who seeks admission will assert his taking an industrial course eventually. It is not therefore clear how *primâ facie* non-industrial pupils could be distinguished from others.

I quite agree.
P.R.—4-7-15.

I would support Mr. Tressler and maintain the last sub-paragraph of paragraph 48. It will not in practice be difficult to work.
P.R.—4-7-15.

Further Office Note.

It is for orders whether the following may be substituted for the third sub-paragraph:—

"Without the special sanction of the Inspector, no pupil who fails to satisfy "these conditions shall be admitted to the workshop section. The introduction of

"pupils who do not fulfil whole-time conditions into the workshop will be regarded "as a grave breach of the regulations."

C.R.—11-10-15.

I would omit the whole of the third paragraph.

C. G. TODHUNTER—25-10-15.

"49. *Apprentice system—Workshop stage.*—Schools may be permitted to admit "apprentices direct to the workshop stage in certain subjects, but every such admis- "sion must be individually sanctioned by the Inspector.

"In the application for sanction (which must be made by the manager) the "reasons for omitting the practice stage must be fully explained and the previous "industrial career of the applicant set forth. The sanctioning order, if obtained, "must be filed for reference with the school transfer certificates and declarations "(Chapter II, paragraph 28).

"50. All apprentices who prove unsatisfactory are to be removed from the "official registers as soon as possible, though they may, at the option of the "manager, be retained as paid workmen.

"Every apprentice will be paid according to a schedule prepared by the manager. "Payment may be on a time or work basis at option, but must be proportionate to "outturn.

"51. *Theoretical courses.*—No apprentice may be admitted to the theoretical "courses unless he has obtained the craft qualification certificate (4th Form) and holds "an Industrial School-leaving certificate. In the case of apprentices admitted direct "into the workshop, the second qualification will not be required, but in all cases "admission to these classes will be subject to the approval, in writing, of the Inspector "and, in general, admission will be refused to all individuals who have not shown "marked ability."

Office Note.

P.R.—4-7-15. | 56. These paragraphs do not seem to be open to any objection.

Further Office Note.

For the words underlined in paragraph 51 above, the following may be substituted:—

"unless he possesses the requisite general educational qualification."

C.R.—11-10-15.

Rule 49. Omit "be permitted to," "in certain subjects," "individually," "(which must be made by the manager)," "if obtained."

Rule 50. After the word "unsatisfactory" add the words "as such."

C.G.T.—25-10-15.

"52. *Fees and stipends*—Schools should levy fees, if possible. If this is done, "they must be levied on a uniform scale.

"It is recognized that some form of stipend is usually necessary to induce pupils "to attend an industrial school. Stipends should ordinarily be confined to the prac- "tice section. In the workshop section a pupil must be encouraged to earn his living "and no assistance must be given to apprentices. Stipends may, however, in special "cases, be given to apprentices attending theoretical courses.

"Stipends, if given, must be given on uniform scales in each class, but deduc- "tions may be made for such part of the cost of a pupil's board and lodging as may "be regarded as properly debitable to industrial education. If, for instance, this "portion is estimated to be Rs. 2 per mensem and a pupil also gets 8 annas per "mensem pocket money, his stipend is Rs. 2-8-0 and must be so shown. In this "case, outside pupils attending the school must be paid Rs. 2-8-0 in cash.

"A schedule of stipends in the form given in Appendix IX is to be submitted "annually. As laid down in paragraph 47 *ante* stipends paid to pupils not *bonâ fide* "industrial must be omitted from the statement."

Office Note.

57. In the first sub-paragraph the words "on a uniform scale" seem to be indefinite. It is not known what is meant whether the rate should be the same for all subjects in which theoretical instruction is given or whether the rate in all schools should be the same, apparently the former. It seems however to be necessary to make the point clear.

I think it is alright.
P.R.—4-7-15.

It is submitted that the first sentence of the second sub-paragraph may be omitted. This general statement does not seem to be quite consistent with what is stated in paragraph 39 of Part I and paragraph 14 of Part III. In that case the second sentence may begin with the words "Where stipends are given they should" and the word "stipends" may be omitted.

P.R.—4-7-15.

In the third sub-paragraph, first sentence, the words "where hostel accommodation is provided" may be inserted between the words "but" and "deductions."

P.R.—4-7-15.

The other portions of this paragraph may be accepted.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

I agree except as to the last sentence which may be omitted.

C. G. TODHUNTER—25-10-15.

"53. *Scholarships.*—The rules regarding scholarships are given in Part III, "Chapter II."

Office Note.

58. Ordinarily this paragraph seems superfluous.

Secretary's Note.

Leave it alone please.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Please see further note below paragraph 54.

C.R.—11-10-15.

"54. *Attendance and dismissal.*—Pupils must be regular in attendance. "Repeated lateness, idleness, absence from class, as well as absence without "leave, renders pupils liable to dismissal. In the case of pupils holding scholarships, "leave up to seven days at a time and not exceeding 15 days in the year may be granted "by the manager. Absence for a longer period may be sanctioned by the manager, "but must be reported to the Inspector who has the right of stopping the scholarship "allowance if he is not satisfied that the reasons adduced are adequate.

"Absence for a month or more *ipso facto* leads to the lapse of the scholarship. "All such cases, as well as the dismissal of scholarship-holders, must immediately be "brought to the notice of the Inspector for orders."

Office Note.

Yes.
P.R.—4-7-15.

59. The word "lateness" may be replaced by the words "late attendance."

164, Home (Edn.)—15

It would seem appropriate that reference to scholarships and the conditions of their grant should come under the special chapter in Part III which deals with them. It seems to be invidious that scholarships under theoretical courses alone should be dealt with under that head, while under the other courses no such references are made. If this is agreed to, these may be added to paragraphs 22 to 26 of Part III. As regards to merits of this rule, the power to grant casual leave provided here is the same as that in the existing Scholarships Notification for technical schools. As regards longer leave the present notification empowers the grant of one month's leave on account of illness without forfeiture of scholarship and of leave for longer periods also in which case no allowance will be granted for the excess period. This does not lead to the lapse of the scholarships but only to the temporary stoppage of payment for the excess period of absence. The draft code declares that the absence for a month leads to the lapse of the scholarship. This seems to be too drastic. It is therefore for consideration whether the existing provision cannot be introduced here. Even otherwise the words "*ipso facto*" in the first sentence of this sub-paragraph does not seem to be consistent with the submission of such cases to the Inspector "for orders." Where the rule operates *ipso facto* there is no need "for orders." Probably such cases can only be submitted for information.

I would make no change.
P.R.—4-7-15.

I do not think so.
P.R.—4-7-15.

I would leave it alone.
P.R.—4-7-15.

Further Office Note.

If the suggestion to omit all references to the new scheme of scholarships (*vide* note under paragraph 40 of Part I) is accepted, paragraph 53 and paragraph 54, except the first two sentences, may be omitted. The scholarship notification will deal with all these matters.

C.R.—11-10-15.

Secretary's Note.

Approved.

C. G. Todhunter—25-10-15.

"55. *Examinations.*—A promotion examination shall be held annually, on the "strength of which promotions will be made. The examination results must be "sent to the Inspector as soon as possible. If any extraordinary promotions are "made these should be brought to the notice of the Inspector for approval.

"56. *Certificates.*—The rules regarding certificate examinations are given in Part "III, Chapter I."

Office Note.

60. These do not call for any remarks except that paragraph 56 may be taken to be unnecessary.

S.K.—15—6-15.

C.K.—20-6-15.

Secretary's Note.

I would leave it alone.

P. Rajagopala Achariyar—4-7-15.

I think I would omit paragraph 56 as we are trying to get rid of everything superfluous.

C.G.T.—25-10-15.

"57. *Special classes.*—Ordinarily schools will only be permitted to provide "the regular courses of industrial training, *i.e.*, up to the Industrial school-leaving "certificate, journeyman or craftsman standard. In particularly well-equipped and "managed schools permission may be accorded for the introduction of the special "classes detailed in part III, chapter IV."

Office Note.

61. With reference to paragraph 10 of chapter I and the note on page 18 *anti* the first sentence of this paragraph may be omitted as it is suggested therein that this restriction as to the agency is needless.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

I would make no change. The word "ordinarily" gives sufficient elasticity.

P. Rajagopala Achariyar—4-7-15.

PART II

Chapter IV.—Conditions for Recognition.

"58. In order to qualify for aid, schools must be recognized. Application for "recognition must be made on the form shown in Appendix XIII

"To secure recognition :—

"(i) The general rules and conditions for recognition and aid must be satisfied.
"(ii) The manager and superintendent must be individually recognized.
"(iii) The instruction staff must hold the required instructor's certificates and must "be of the number prescribed in chapter II, paragraphs 13 and 14.
"(iv) The courses of instruction must be recognized.
"(v) The number of pupils must be not less than the minimum prescribed."

Office Note.

62. The first sentence seems to be out of place here as it occurs in the right place in paragraph 8 of this part under conditions for aid.

In the first item laying down conditions for recognition, it seems to be better to omit the words "and aid." Recognition precedes aid generally and it is not necessary that every recognised institution should be aided.

I would leave it alone.
P.R.—4-7-15.

The words "and aid" may be omitted.
P.R.—4-7-15.

Further Office Note.

In item (iii) above, the words "the required instructor's certificates" may be modified into "the approved certificates" with reference to note under paragraph 41 (Chapter III of this part).

C.R.—11-10-15.

Secretary's Note.

For the second sub-paragraph *substitute* "Recognition involves approval of manager and superintendent, instructing staff, courses of instruction and number of pupils."

C. G. Todhunter—30-10-15.

"59. For purposes of recognition each stage—the practice, workshop and "theoretical—is treated as a separate unit and is to be separately recognized. "Recognition to the theoretical stage implies recognition in the workshop and practice "stages : recognition to the workshop stage implies recognition in the practice stage.

"The general rules for recognition and aid have already been explained in "Chapters I and II."

Office Note.

63. The last sentence of this paragraph may be omitted.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

I see no harm in it. It may remain.

P. RAJAGOPALA ACHARIYAR—4-7-15.

The first and second sentences are contradictory as they stand. The third is unnecessary. *Substitute*—

"The lower stage must always be recognised first before recognition is extended to the higher. Thus there can be no recognition in the workshop stage till the practice stage has been recognised or in the theoretical classes till the workshop stage has been recognised."

C. G. TODHUNTER—30-10-15.

"60. *Recognition of Managers and Superintendents.*—The qualifications "required for these posts have already been generally explained in Chapter III, "paragraph 41 and no hard and fast rules can be laid down. The decision as to "whether an individual does or does not satisfy these conditions must rest with the "Director. [It is to be noted, however, that an individual recognized as capable of "managing any one school is not necessarily recognized as capable of managing "any other or even the same school under different conditions. Accordingly,] "whenever there is an increase or upward change in the subjects taught in "a school, or when a manager or superintendent is transferred from one school to "another he must be recognized afresh. Application for recognition in these "appointments must be accompanied by a general statement regarding the applicants' "qualifications and training. If the Director from this statement, from personal "knowledge or from further enquiry, is satisfied that the applicant is qualified for "the appointment, he will grant a certificate of recognition subject to the limitations "explained."

Office Note.

64. Please see note under paragraph 41. No further remarks seem called for here.

Secretary's Note.

The paragraph needs no change.

P.R.—4-7-15.

Further Office Note.

The portion enclosed in brackets may be omitted.

C.R.—11-10-15.

Substitute—

"Recognition of managers and superintendents is at the discretion of the Director and is good only for institutions and subjects in respect of which recognition has been given. Every application for such recognition must be accompanied by a full statement of the applicant's qualification and training. Whenever a substantial change in the course of teaching is made or a manager or superintendent is transferred to another institution, a fresh application for recognition must be made.

C.G.T.—30-10-15.

"61. *Instructors.*—All instructors will be required to possess instructor's "certificates. The certificate required for charge of the practice section is the III* "class or higher: for charge of the workshop section, II class or higher. To teach "a subject in the theoretical stage an instructor must hold a I class certificate. In "certain subjects the Director may give permission for a III class instructor to have "charge of the workshop section.

"Instructors must hold a certificate for the subjects which they supervise. "Drawing must be taught by a qualified drawing master."

Office Note.

65. The only point that requires notice here is about the word "qualified" used before the words "drawing master". It is not known under what test the drawing master is to be qualified. It is nowhere laid down in this code nor in the Educational Rules. Apparently a pass in the Government Technical Examination in drawing is meant. If so, it would be better to specify it.

Mr. Tressler may be asked about it.

P.R.—4-7-15.

[Paragraph 7 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

61. The qualification I require in a Drawing master is not that obtained by passing the Government Technical Examinations. I want a man with some practical mechanical knowledge of what he is doing and should therefore prefer to leave the question of qualification open. If, however, the term is to be defined I presume it will be necessary to specify the Government Technical Examination in Drawing, but subject to the condition that the Inspector is satisfied with the man's practical attainments. This condition again introduces a vague term; but I do not see how it can be avoided. Drawing masters will be one of my difficulties and I do not see how I can accept them, merely because they have passed the examination.

Further Office Note.

In view of Mr. Tressler's remarks, paragraph 61 may perhaps remain as it is.

S.K.—11-10-15.

In the absence of a normal school and consequent issue of separate certificates of different grades, it seems advisable to omit all references to various grades of certificates in the first sub-paragraph. For the present, the qualifications of instructors will have to be approved by the Director in each case. If so, the first sub-paragraph may be amended as follows:—

"Instructors to teach particular sections and particular subjects should hold certificates approved by the Director for the purpose."

C.R.—11-10-15.

I agree, but would alter the wording slightly.

Applications for recognition of instructors, including drawing masters, must show their qualifications and training and the subjects which they are employed to teach. Recognition will be at the discretion of the Director.

C. G. TODHUNTER—30-10-15.

"62. *Courses.*—Each subject must be recognized up to one of the recognized "stages—the practice, workshop or theoretical stage. No stage will be recognized "unless the instructor therein is duly qualified to hold charge.

"The theoretical stage may, however, be recognized even if there is no qualified "I class instructor provided, if the Director regards the manager or superintendent as "competent to impart theoretical instruction in the subjects for which recognition is "sought.

"A school will therefore be recognized in the following manner, e.g.—

"Fitter work	Theoretical stage.
"Weaving	Workshop stage.
"Metal work	Practice (School-leaving certificate stage).

"No subjects other than those recognized may be taught in an industrial school."

Office Note.

P.R.—4-7-15. | 66. This does not seem to call for any remarks.

Further Office Note.

The words "I class" may be omitted.

C.R.—11-10-15.

Only subjects in respect of which a school is recognized should be taught. Recognition will depend primarily on the qualifications of the manager, superintendent and instructors to teach the subject in question. A subject may be recognized as far as the practice, workshop or theoretical stage.

C. G. Todhunter—30-10-15.

— —

"63. *Numbers.*— For recognition to the theoretical stage the minimum number of "recognized pupils must be 30 in that subject.

"For recognition up to the workshop stage, the minimum number is 25.

"For recognition up to the practice stage the minimum number is 15.

"The minimum number of pupils altogether in a school must be 30."

Office Note.

67. The minimum number of pupils for recognition to the theoretical stage is fixed as 30. Under paragraph 14 the numerical limit for each teacher in a theoretical class is 20. It would thus appear that for theoretical classes there must at the start be two instructors and without that the class will not be recognized. This does not seem to be the intention. It must be possible to recognise a class with at least one teacher. If so the figure "30" may be altered into "20". For the same reason the minimum number of pupils altogether in a school which is put down as 30 should be altered into 20 where theoretical stage alone in a school in one subject is recognized.

Secretary's Note.

Mr. Tressler may be asked about this.

P. Rajagopala Achariyar—4-7-15.

[Paragraph 8 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

63. The figures 30 and 25 may be altered to 20.

Further Office Note.

Please see office note above. There is no necessity to change the figure 25 into 20.

S.K.—11-10-15.

C.R.—11-10-15.

I think we want more elasticity. *Substitute*—

"A second condition is that there should be not less than a minimum number of recognized pupils. This is fixed at 30 for a school as a whole and 15 for any one stage of instruction."

C.G.T.—30-10-15.

———

"64. *Special conditions for recognition in the higher stages.*—Schools will not be "recognized up to the theoretical stage unless they have been permitted to introduce "the general educational course leading up to the craft qualification certificate or can "show that they have other recognized facilities for educating pupils up to this stand-"ard (4th form). *Per contra* schools will not be permitted to introduce these general "educational courses unless the staff and general arrangements of the school appear "to the Director to be adequate and suitable for purposes of theoretical instruction.

"Recognition up to the workshop stage will be conditional on the maintenance "of proper workshop accounts and on these accounts, if not actually showing a profit, "at least bearing testimony to a business-like and commercial system of manufacture. "If these conditions are not fulfilled, recognition in the workshop stage will be with-"drawn though schools may, if they wish, continue to run their workshop on their own "lines provided that none of the rules contained in this code are infringed thereby."

Office Note.

68. It seems to be hard that every recognition up to the theoretical stage should be subject to the requirement regarding the provision for general education. In some cases such a provision may not be necessary and in others it may be admissible to insist on such provision. All that is required seems to be that students with general educational qualification lower than the minimum prescribed should not be allowed to attend theoretical classes. Some latitude should, it is submitted, be left to the management in this matter. The second sentence of this paragraph may be allowed. So also the second sub-paragraph.

Secretary's Note.

The latitude is with the Director of Industries and it is best with him. I would make no change.

P. Rajagopala Achariyar—4-7-15.

Further Office Note.

The whole of the first sub-paragraph may be omitted with reference to the notes under paragraph 24 of part I.

The heading may be altered into "Special conditions for recognition in the workshop stage."

C.R.—11-10-15.

Approved. This rule should be placed before No. 63.

C. G. Todhunter—30-10-15.

———

"65. *Counting of pupils.*—A part of the teaching grant to schools is based on the "number of pupils in the various stages. It has already been laid down that separate "registers shall be maintained for the school and workshop sections and that recogni-"zed pupils shall be entered separately from paid workmen and all other non-recogni-"zed workers."

Office Note.

Paragraphs 73, 36 and 45 of Part II of the Code.

69. The whole of this paragraph seems to be unnecessary as the same matter is referred to in other places.

Secretary's Note.

I would leave it alone.

P.R.—4-7-15.

Further Office Note.

As, with reference to His Excellency's note on page 5 ante, the system of grant proposed by Mr. Tressler is not to be approved at present this paragraph may perhaps be omitted.

C.R.—11-10-15.

Omit.

C.G.T.—30-10-15.

———

"66. *A recognized pupil* in any stage is one who has satisfied the conditions for "admission to that stage and has not been under training in that stage for a period in "excess of that prescribed and further satisfies the conditions regarding time and "admission (*vide* paragraphs 44-51). [Only recognized pupils may be counted and "for purposes of grant, a half-time pupil in the practice stage counts as half a "pupil.]

"In the case of apprentices taking the theoretical course, the time thus spent may "be included in the time prescribed for whole-time practical work, but the inspector "has the right of insisting on a pupil leaving the theoretical classes and devoting "himself entirely to practical work if he considers that the apprentice will not benefit "by the theoretical training afforded.

"If a pupil attends two courses (which is only possible in the practice section "under the half-time arrangement) his name shall be entered in black in his main "subject and in every other and he shall only be counted once."

Office Note.

70. It would seem that the first paragraph would more appropriately come under the head "teaching grants" for it relates to the assessment of grant.

It is laid down that pupils remaining in a particular stage in excess of the prescribed period would not count for grant. Under paragraph 45, the increase in the period of training in "the practice" stage should receive the sanction of the Director and where such sanction is refused the pupil will not be a "recognized" one. Thus pupils whose retention is sanctioned by the Director should be considered "recognized" and when recognized they should naturally count for grant; if so, such cases should be provided for in this rule, and the words "or has been retained for such excess period with the approval of the Director" may be inserted after the word "prescribed". In the second sub-paragraph the significance of the word "thus" in the second line is not understood. The point may be made clear. The rest of this paragraph does not call for any remarks.

Secretary's Note.

Mr. Tressler may be asked.

P. Rajagopala Achariyar—4-7-15.

[Paragraph 9 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

66. The addition of the words "or has been retained for such excess period with the approval of the Director" may be made as suggested. I do not think the first sub-paragraph should be transferred to the head "Teaching grants"; because although it refers to the assessment of grants, it refers also to the pupils and therefore it must appear in the chapter in which it is placed.

The objection that the meaning of the word "thus" is obscure may perhaps be met by substituting the word "attaining" for "taking" in the first line of the second sub-paragraph.

Further Office Note.

As regards the second paragraph of Mr. Tressler's note above it is submitted that the alteration suggested in the second sub-paragraph so as to bring out the force of the word *thus* does not seem to improve the sense. Perhaps the expression "the time thus spent" means "the time spent in the theoretical course" and if so, the words "the time spent therein" may be substituted for it.

The portion within brackets in the first sub-paragraph may also be omitted.

C.R.—11-10-15.

Substitute—

"A recognized pupil in any stage is one who has satisfied the conditions for admission to that stage and has not continued in it (except with the express permission of the Director) for more than the period of the course laid down. An apprentice taking a workshop or theoretical course may be a recognized pupil.

C. G. Todhunter—30-10-15.

45

PART II

Chapter I.—Character, Objects and General Conditions of Aid.

Office Note.

71. The chapter is almost similar to chapters I and II of the existing Grant-in-Aid Code.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Then open the chapter with an explanation of the fact—

"Grants-in-aid to industrial schools are governed as far as possible by the rules of the Grant-in-Aid Code which is applicable to schools in general. The present chapter reproduces chapters I and II of the code with necessary modifications. The modifications are shown in italics."

In typing give wide margins to the portions which are on quotations and when they are printed have them set up in smaller type.

C. G. Todhunter—30-10-15.

——

"1. *Grants-in-aid.*—A sum of money is annually set apart to be expended under "these rules as grants-in-aid of industrial schools leased to or under private management with the object of extending and improving industrial education. Such grants "will be given impartially and without reference to any religious instruction to all "schools which impart sound instruction, subject to the conditions hereinafter specified and with due consideration for the requirements of each locality, and of each "institution, and of the funds available."

Office Note.

72. The words "leased to or" between the words "industrial schools" and "under private management" are newly introduced; they do not appear in the existing code. The addition seems to be unnecessary in the industrial code also as it is not proposed to accept the suggestion to have a separate class of schools called "Government schools leased to private bodies for working." Please see note under paragraph 35 of Part I, page 37 of notes ante.

I have already noted that the point should be referred to Mr. Tressler.

P.R.—4-7-15.

In the existing code the sentence "these rules do not apply to European schools" appears at the end of this paragraph. Mr. Tressler has omitted this in his draft code. At present it is not likely to have a separate code for *European industrial schools* and the European code for ordinary schools does not contain any provision for industrial schools. The present industrial code may therefore apply to the European industrial schools also that may be opened in the Presidency. Mr. Tressler's action in omitting the sentence in question may therefore be approved.

P.R.—4-7-15.

It may also be noted here that the paragraph does not make any reference to schools under local bodies. This, it is submitted, is correct as such schools do not come within the purview of the Grant-in-Aid Code but are aided by special subsidies sanctioned by the Government.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Reproduce the Code as it stands, omitting the last sentence.

C.G.T.—30-10-15.

164, Home (Edn.)—17

"2. *Reservation of discretion by Government.*—The Government reserve to themselves, anything in the rules of this Code notwithstanding, the right to refuse or to withdraw any grant at their entire discretion.

"Grants will ordinarily be withdrawn from a Manager if he or any of the instructors employed by him takes part in political agitation directed against the authority of Government or inculcates opinions tending to excite feelings of political disloyalty or disaffection among the people."

Office Note.

73. For the last word "people" in this paragraph the word "pupils" occurs in the existing Code. The latter word may perhaps be substituted in the paragraph.

S.K.—15-6-15.
C.K.—20-6-15.

Secretary's Note.

"People" includes "pupils" I would make no change.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Reproduce the Code. These subtle changes in the wording of rules on which case law has no doubt grown up are apt to be dangerous.

C. G. TODHUNTER—30-10-15.

"3. *Definitions and terms.*—The term '*Director*' signifies Director of Industries; the term '*Inspector*' signifies the Inspector of Industrial Schools; and the term '*Manager*' includes a board of managers."

Office Note.

74. The existing Grant-in-Aid Code contains definitions about "local boards," "local funds" and "President" besides those in the above paragraph. As that code provides for the payment of grants to schools by local bodies from their own funds the definitions have been put in. The industrial code does not however at present provide for any such grant from local funds and hence no reference to the expressions "local boards," etc. It is submitted that local bodies are not likely to set apart any portion of their revenues towards the payment of grants to industrial schools and the paragraph may be approved as it is.

P.R.—4-7-15.

S.K.—15-6-15.
C.R.—20-6-15.

Secretary's Note.

There is no reason why a local body should not start an industrial school. Reproduce the code with modifications as above. Properly all these definitions should go into the first chapter of the book.

C. G. T.—30-10-15.

"4. *Objects for which aid may be given*—

"(1) Grants are given for teaching.

"(2) Grants are also given for—

"(i) the erection, enlargement and purchase of school buildings and hostels or boarding houses for students attached to educational institutions (building grant);

"(ii) the purchase of school and hostel furniture, apparatus, chemicals, and appliances; of books for school libraries; and of the plant, materials and tools required for laboratories and workshops (furniture grant);

"(iii) the cost of preparing work for exhibitions."

Office Note.

75. Besides the objects mentioned above, the existing code makes provision for the payment of the following grants also:—

Article 4 of the Grant-in-Aid Code.

(*a*) the payment of stipends to teachers under training,

(*b*) the cost of needle-work or other art and industrial exhibitions, and

(*c*) the endowment of professorships, lectureships, teacherships, scholarships, laboratories, workshops, museums and other educational objects.

The reason for omitting the first of these is apparently that according to Mr. Tressler's scheme the training of teachers should be undertaken solely by the State. It has been suggested in the note under paragraph 10 of Part I, page 18 ante, that this proposal should be negatived so as to render it possible to open training schools by other than Government agency also. It is therefore necessary to make provision for the payment of stipendiary grants and item (*a*) above may be inserted in the paragraph.

Paragraph 10 of Part I of the Code.

I would, for the present, accept the position that the training of teachers will be a Government business.

P.R.—4-7-15.

Again, Mr. Tressler provides for the payment of grants towards the cost of *preparing work* for exhibitions. The present code provides for grants towards the cost of *holding* industrial exhibitions. It appears to be necessary to retain the latter in the industrial code. The South Indian Athletic Association has applied for a grant towards the industrial exhibition which they hold in Christmas and similar applications may be received from other quarters. In order to provide for these cases subclause (2) (iii) of the paragraph may run as follows:—

I think it sufficient to provide in the Code for "preparing work." The "holding" of exhibitions is a larger affair and may be treated as a special matter outside the Code.

P.R.—4-7-15.

"The cost of industrial exhibitions and of preparing work for such exhibitions."

Mr. Tressler may be asked about this.

P.R.—4-7-15.

It also seems to be necessary to make provision as in the existing code for the payment of grants towards endowments. The following clause may be added as subclause (2) (iv):—

"the endowment of scholarships, laboratories, workshops, museums and other industrial objects of educational value."

Attention is in this connection invited to G.O. No. 551, Educational, dated the 8th August 1911, from which it will be seen that there had been considerable agitation in respect of grants for endowments.

S.K—15-6-15.

C.R—20-6-15.

[Paragraph 4 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

4. I have no objection to the addition of the clause proposed.

Secretary's Note.

Reproduce the Code as it stands.

C. G. TODHUNTER—30-10-15.

Office Note.

Before going to the next paragraph it has to be noted that Mr. Tressler has left out paragraph 6 of the Grant-in-Aid Code which relates to the authorities for sanctioning the grants. It seems to be desirable to have a similar paragraph in the Industrial Code also especially as a reference to "sanctioning authority" is made in paragraph 6. The following paragraph may therefore be inserted here: —

"Except in cases in which a reference to the Government is required all grants are sanctioned by the Director."

Secretary's Note.

I agree.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Reproduce the Code.

C. G. TODHUNTER—30-10-15.

"5. *Interpretation of rules.*—The interpretation of any rule in this Code shall, "in the first instance, rest with the Director; provided that no interpretation of a "general nature shall be binding on a manager which has not been approved by "Government and notified in the *Fort St. George Gazette.*"

Office Note.

76. This paragraph is the same as the one appearing in the existing Code. The only remark that seems called for about it is that being of a *general* application to all the rules in the draft Code it must naturally appear in Part I of it which deals with general principles. It may perhaps be put at the end of chapter I of Part I which deals with definitions.

P.R—4-7-15.

S.K—15-6-15.

C.R.—20-6-15.

Secretary's Note.

This difficulty will disappear if it is clear that you are only quoting.

C.G.T.—30-10-15.

"6. *Appeal to sanctioning authority.*—An appeal shall lie to the sanctioning "authority for the revision of its orders."

Office Note.

77. This is the same as paragraph 8 of the Grant-in-Aid Code and need not be objected to.

P.R.—4-7-15.

"7. *Appendices to have effect of rules.*—The appendices to the Code shall have "the same effect as the rules of the Code and shall be treated as part of the Code."

Office Note.

78. This paragraph too is one of general application and must therefore find a place in the beginning of Part I. It may also be put at the end of chapter I of that part.

Yes.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Let it stand—as a quotation.

C.G.T.—30-10-15.

"8. *Control.*—Every institution on behalf of which aid is sought shall be "under the control of one or more persons recognized by the department, who in the "capacity of proprietors, of trustees, or of members of a committee elected by the "society or association by which the institution is maintained, shall undertake to be "answerable for the maintenance of the institution and the fulfilment of all the condi-"tions of recognition and aid including the due enforcement of such rules of disci-"pline as are prescribed from time to time.

"The controlling authority may, with the approval of the department, appoint "a person as correspondent to transact the current business of the institution with "the department.

"Application for change of control of an institution should be made to the "Director. To qualify for aid a school must be recognized."

Office Note.

79. This paragraph is almost the same as paragraph 10 of the Grant-in-Aid Code and may be approved.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Reproduce the Code.

C. G. TODHUNTER—30-10-15.

"9. *Declaration by the controlling authority.*—Every application for recognition "shall be made in the form shown in Appendix XIII, and shall contain a declara-"tion, signed by the correspondent to the effect that the conditions of recognition and "aid laid down in this Grant-in-Aid Code are being and will continue to be fully "observed, excepting any rules from which the institution may be specially exempted, "and that the management is prepared to subject the institution, together with the "current endowment, and trust accounts; its establishment, time table and registers, "to inspection, and to furnish such returns as may be required by the department."

Office Note.

80. In this paragraph Mr. Tressler speaks of "application for recognition" while paragraph 11 of the Grant-in-Aid Code refers to "application for aid." According to Mr. Tressler's Code no separate application for *aid* need be submitted. If the school secures recognition it will become eligible for aid. In regard to ordinary schools though they have secured recognition they must apply separately for aid. The only objection to Mr. Tressler's proposal is that a school may seek recognition but may not be in need of Government aid. But Mr. Tressler will apparently aid only those schools which really require Government help. The paragraph may stand as it is for the present. If any alteration is necessary so as to correspond to the provisions of the Grant-in-Aid Code it may be made later on after experience has been gained.

Paragraph 71 of Part II of the Code.

I quite agree.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Reproduce the Code substituting "Technical Education Code" for "Madras "Educational Rules and Grant-in-Aid Code."

C.G.T.—30-10-15.

"10. *Reservation of right regarding the use of books.*—Government reserve to "themselves the right to forbid or to prescribe the use of any book or books in aided "schools."

Office Note.

81. This paragraph is the same as the first sub-paragraph of paragraph 12 of the Grant-in-Aid Code and need not be objected to.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Reproduce the Code.

C. G. TODHUNTER—30-10-15.

Office Note.

Before considering the next paragraph it has to be stated that the Grant-in-Aid Code has a paragraph here as follows :—

Article 13 of the Grant-in-Aid Code.

"*Income to be devoted to educational purposes.*—No aided institution shall be allowed to spend any portion of its income for other than educational purposes."

It is not known why Mr. Tressler has omitted this paragraph. It appears to be necessary to retain this in the Code to prevent diversion of funds of schools for other purposes.

I agree.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

C.G.T.—30-10-15.

"11. *Reservation of right regarding employment of instructor.*—It shall be "competent to the Director of Industries to forbid the employment in aided schools "of any instructor whose certificate has been withdrawn after due enquiry and a fair "hearing have shown him unfit to be an instructor."

Office Note.

82. The similar rule in the Grant-in-Aid Code is as follows :—

Article 14 of the Grant-in-Aid Code.

"It shall be competent to the Director of Public Instruction to forbid the employment in aided colleges and schools of any teacher whose certificate has been withdrawn after due enquiry or who after due enquiry has been considered by him unfit to be a teacher."

The alterations made by Mr. Tressler in the last portion of the paragraph seem to be unnecessary. The rule may, it is submitted, be retained in the Industrial Code as it is in the Grant-in-Aid Code.

I would accept Mr. Tressler's wording.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Reproduce the Code.

C.G.T.—30-10-15.

Add rule 14-A of the rules unless it has been made quite clear elsewhere that the rules of discipline in the Madras Educational Rules are binding on all industrial schools.

C.G.T.—30-10-15.

Submitted that this has not been introduced anywhere in the new Code ; nor do the Educational Rules apply, without specific direction, to industrial schools. Rule 14-A has therefore been inserted in the revised draft. With reference, however, to the last clause of the second sub-paragraph it is submitted that, instead of the disaffiliation under section 24 of the Indian Universities Act, withdrawal of recognition and aid of the school may be substituted.

C.R.—3-11-15.

PART II

CHAPTER V.—GRANTS.

"67. *Character and object of aid.*—The character of grants has already been "stated in Chapter II.

"68. *Admission to aid.*—The Director shall determine what institutions shall "be admitted to aid after taking into account the character, the efficiency and the "financial condition of the institutions, the educational needs of the locality and the "funds at his disposal.

"69. *Withdrawal from aid.*—The Director may, after giving due notice, with-"draw aid from an institution, should the financial condition of the institution or the "educational needs of the locality cease to warrant its continuance.

"70. *Penalties.*—The Director may, on the report of the inspecting officer, after "enquiry, withhold, reduce, or suspend the grant on account of falsification of the "registers, or misrepresentation regarding fees, attendance or other matters or "violation of any of the conditions of recognition or aid, or other proved fraud or "irregularity."

Office Note.

83. Paragraph 67 may be omitted as unnecessary and the remaining three paragraphs follow articles 30, 31 and 36 of the Grant-in-Aid Code respectively and may be accepted.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

I would make no change.

P. RAJAGOPALA ACHARIYAR—4-7-15.

I think this chapter needs to be entirely recast. *Substitute* the following :—

"The system of teaching grants in industrial schools follows that for secondary schools in chapter IV of the Grant-in-Aid Code so far as possible. The chapter is reproduced below with changes in italics."

Here copy the chapter with necessary changes except rule 33 for which substitute the rule on page 74.

C. G. TODHUNTER—30-10-15.

"71. *Application for grants.*—Ordinarily teaching grants will be allotted by the "Director after a scrutiny of the annual returns and without specific application by "the management. All other grants must be applied for. A first application, "stating generally the character and extent of the expenditure on behalf of which "aid is sought, should be submitted not later than January 15 of each year. If "the grant is to be sanctioned during the financial year beginning with the following "April, final revised application must be made not later than April 15."

Office Note.

84. As already pointed out Mr. Tressler's idea is that no specific application for teaching grants is necessary. This principle need not be objected to. The definite significance of the third and fourth sentences of this paragraph is not clear. It is unlikely that the management will be able to forecast all that is needed so early as three months before the beginning of the year. Such requirement is not insisted on in the case of ordinary schools. Apparently Mr. Tressler intends thereby to base his budget allotment on this application. Even for this purpose 15th January is too late. In the case of ordinary schools applications are made at all times during the year and grants are disbursed as funds become available. It will be considered ahardship to preclude schools from applying for grants beyond the 15th January of a year. If this is approved, the third sentence may be omitted. Under each description of grants specific rules prescribing the manner and the date of submission of applications are laid down and the general rule here will be unnecessary and

P.R.—4-7-15.

inconvenient. Further it is not known what is meant "by first application." In the case of building grants where the revised rules for ordinary schools are proposed to be adopted, the preliminary application is requisite and no date is prescribed. If it is approved, the fourth sentence will also be unnecessary.

Mr. Tressler may be asked.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

[Paragraph 10 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

71. The third and fourth sentences have been entered because industrial schools now make it a point to apply for grants right at the end of the year. A school is not precluded from receiving grant by not having anticipated requirements in January, but the submission of the first application enables me to deal with the bulk of my grant and know how I stand. Applications have been called for this year on the lines proposed and no objections have been raised whilst an early knowledge of what is likely to be required has enabled me to divide my grant much more fairly than in previous years. A reserve is always kept to meet unforeseen applications but it is argued that expenditure on a large scale can always be anticipated some time ahead. If desired the last paragraph may be modified so as to make it clear that failure to apply does not necessarily preclude a school from obtaining grant, but I consider that it will enormously facilitate dealing with grant allotments if applications are called for early.

Further Office Note.

In view of Mr. Tressler's remarks above, the third and fourth sentences of the paragraph may perhaps be retained for the present.

C.R.—11-10-15.

"72. *Payment of grants.*—(i) Grants for a year may, on or after 1st August of "that year, be drawn on a bill prepared in the prescribed form (Appendices XVI—"XVIII) and countersigned by the Director.

"(ii) On receipt of the countersigned bill the manager shall endorse it and "present it for payment at the nearest treasury. Bills received by the manager during "March shall be cashed before the 15th of that month.

"(iii) Any adjustment which, for any reason, it may be found necessary to "carry out in a grant once paid may be made in the grant for the following year."

Office Note.

85. This follows article 38 of the Grant-in-Aid Code. This paragraph relates only to teaching grants as separate rules regulating the payment of other grants are in existence in this code. The paragraph may therefore go under "Teaching grants." The ordinary code prescribes the countersignature of the *Inspector*. In the case of industrial schools the Director's countersignature is laid down. This may be allowed for the present until experience warrants the substitution of the countersignature of the Inspector.

P.R.—4-7-15.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Teaching Grant.

"73. The Teaching grant is made up of two parts, one based on cost of staff "(staff grant), the other on the number of recognized pupils under training "(capitation grant).

"74. In the schedule of staff (Appendix X) the cost of staff is apportioned out "and on that part properly debitable to industrial education a certain percentage "will be paid as capitation grant. If a school is not recognized beyond the practice "stage in any subject it will draw a staff grant as shown in the appended schedule "and a capitation grant on the number of recognized pupils in that stage at a rate "per head which varies with each subject and is shown in column (*b*) of the "appended schedule.

"If the school is recognized up to the workshop stage in any one subject the "percentage grant on the general staff and on the staff employed in the subject for "which recognition has been accorded up to the workshop stage will be increased by "a further percentage depending on the character of the subject.

"A capitation grant, as given in column (*d*) of the appended schedule, will "also be allowed on all recognized apprentices in the workshop stage. Further, the "capitation grant on pupils in the practice stage will be enhanced as shown in "column (*c*) of the schedule.

"If a school is recognized up to the workshop stage in more than one subject "it may draw the increased percentage on the staffs of each of these subjects but "only once on the general staff.

"75. The basis of the capitation grant is the average number of recognized "pupils or apprentices taken over a period of three years.

"In calculating numbers for capitation purposes in the practice section the "actual totals will be reduced in proportion to the percentage of pupils who fail to "complete their workshop course—due allowance being however made for unavoid-"able wastage. A further reduction is also to be made, determined from previous "returns, on account of pupils who are eliminated during their first year or fail to "complete the school course. Here again, due allowance will be made for unavoid-"able waste.

"A similar reduction will be made for apprentices who fail to qualify.

"76. As a rough guide to the amount of grant the following schedule has been "prepared :—

Staff Grant.

"Staff grant for schools not recognized beyond the practice stage in any subject.

"General staff : ⅛. Subject staff : ⅛.

"*Extra* staff grant for schools recognized up to the workshop stage in one or more subjects.

"General staff up to : ⅛. Subject staff : ⅛.

Capitation Grant.

Course.	Grant on pupils in practice stage.		Grant on apprentices in workshop stage.
All courses leading up to following craftsman's certificates (*vide* Part III, paragraph 29.)	Grant if subject is recognized in practice stage only.	Extra grant if subject is recognized up to workshop stage.	
(*a*)	(*b*)	(*c*)	(*d*)
Mechanic and Carpenter	5	5	25
All other courses	5	2½	10

"These rates have however only been tentatively fixed and cannot be regarded "as binding since the actual grant allowed by the Director will ultimately be "determined by the sum available for the purpose."

164, Home (Edn.)—19

Office Note.

86. No specific basis is *at present* laid down for the fixing of grants for industrial schools. All the circumstances of the school are taken into consideration, and the amount is fixed at the discretion of the Director. In his original note of 1912, the Director discussed in detail the various possible bases for fixing this grant and he came to the conclusion that the grant based on principle of pupils and the staff was the only feasible one. The same is now adopted in the draft code and has been accepted by the committee. There seems to be generally no objection to the adoption of this principle. It is already adopted in the case of elementary schools. The following points are not, however, clear :—

Chapter VI of the Grant-in-Aid Code.

Page 8 of G.O. 833, Educational, 16th July 1912.

I agree.
P.R.—4-7-15.

Article 15 of the Grant-in-Aid Code.

(i) It is not known on what basis the salaries of staff will be debited to industrial education and other objects as required by Appendix X. This forms a preliminary basis on which the proportion of grant is to be determined. It seems to be necessary to definitely lay down what portion of salaries is admissible for the purpose of the grant.

I would rather leave this to the discretion of the Director.
P.R.—4-7-15.

(ii) It is nowhere stated what will be the financial effect of the introduction of the new principle in determining the grant and how each typical school will fare under the new scheme.

The whole thing is tentative. Please see the last sub-paragraph.
P.R.—4-7-15.

Mr. Tressler in his covering letter states that teaching grant is intended to be such as to give a minimum to the schools that only provide partial instruction and a maximum to those that turn out finished workmen and that he could not say how the scales proposed would work out in practice. He added that if the schools continued in the existing lines the grant would be much the same as are now. But he however anticipates that schools will change, though he could not say how that will affect the grant. He roughly estimates that the total grant, which would be payable according to the new scale, would not exceed Rs. 60,000 for some time to come, the present provision for teaching grants being Rs. 35,000 in the current year's budget. The above figure seems to be only the ultimate possible liability, as the code itself will be gradually introduced and schools may take time to develop their requirements. In submitting the budget for the current year Mr. Tressler asked for only Rs. 40,000 as the requirement for the current year. It will thus be seen that the ultimate liability of Rs. 60,000 will only be gradually worked up to. There seems to be no use in attempting to get any more definite information on this financial aspect from the Director at present. He himself is not certain about its effects. It is therefore for consideration whether the scheme may be admitted tentatively for the present.

Absolutely none.
P.R.—4-7-15.

It is observed that in paragraph 75 no provision is made for calculating the capitation grant for *new* schools. It is proposed to take the average number of pupils or apprentices for a period of *three* years. It seems to be necessary to lay down what should be the basis for the schools *newly* started.

I would leave this to the discretion of the Director.
P.R.—4-7-15.

These paragraphs do not lay down any rule to regulate the grants payable to schools in the theoretical stage. It is not known why they have been omitted. It seems necessary to include them also in the code. Similarly for technological courses.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Please see paragraph 11 of the Code. The whole policy of Mr. Tressler is to confine attention to "Industrial" education. I would not interfere with this policy for the present.

P. Rajagopala Achariyar—4-7-15.

Further Office Note.

In view of His Excellency's note on pages 5 and 6, the Secretary has directed that the system of grants should be as elastic as possible. It may therefore be laid down that grants should be fixed by the Director with reference to the circumstances of each case and after scrutiny of the budget estimate of receipts and charges for the year. His Excellency directs that some "limits" should be laid down within which the Director can assess the grant. Under the existing Code, no such limit is fixed. Perhaps half of the net expenditure may be laid down as the limit. This is *virtually* what is obtained in the case of secondary schools though further limited by the amount contributed by the management. If in any particular case, a higher rate of grant is, in the opinion of the Director, necessary, he can come up to Government for the special sanction. Such cases should not ordinarily be many in a year. If eventually on experience it is found necessary to alter the system of grant, the Director may address Government separately with facts and figures for altering the Code in this respect. Subject to approval, the following is suggested for substitution to paragraphs 73 to 76 :—

Vide rule 44 of the Madras Grant-in-Aid Code.

"The teaching grant for each school will for the present be fixed by the "Director every year on a consideration of the inspection report for the past year, and "the budget for the ensuing one, and the general utility of the school and the amount "contributed from private sources. Provided that no grant shall be given without "the express sanction of Government that amounts to more than half the net cost of "the school after excluding the amount contributed by the management."

C.S.—11-10-15.

C. G. Todhunter—30-10-15.

"*Building Grants.*

"77. *Applications for aid*—Applications for building grants must be made in the "prescribed form (Appendix XIV). They shall furnish satisfactory evidence of the "necessity for the erection, or enlargement, or purchase of the building, and shall "be accompanied by a plan and an estimate (prepared by a professional architect or "other competent person) of the cost of the work proposed. If any allotment is "required during the year, applications must reach the Director before April 15.

"78. *Object and proportion of aid.*—(i) Grants not exceeding one-half of the total "cost may be given towards the erection, or enlargement, or purchase of school "buildings and hostels or boarding houses for students attached to educational "institutions, subject to the general conditions laid down regarding accommodation "in Chapter II. Except in the case of hostels or boarding houses attached to educa-"tional institutions, grants shall not be given to provide residences for teachers or "pupils.

"(ii) Grants shall not be given for a building regarding which the Director "has not been consulted and for which aid has not been promised and the plans and "estimates approved previously to its erection, enlargement, or purchase.

"(iii) The amount of grant to be actually disbursed shall be regulated by the "actual cost of the work as finally completed. The grant promised with reference "to the approved plans and estimates will be the maximum that will be paid; but "the amount to be disbursed shall in no case exceed one-half of the actual cost of the "work as finally executed. Before making payment the Director will require the "management to furnish vouchers or certificates showing the actual amount expended "by them in completing the work.

"(iv) Grants shall not generally be given for a building which has not been "completed by the time fixed in the order sanctioning the grant.

"79. *Notice of commencement of work.*—When a grant-in-aid has been promised "in respect of any building, the management shall, prior to the commencement of "work thereon, give fifteen days' notice in writing to the Executive Engineer in "charge of the division wherein it is proposed to construct the building.

"During the progress of the work, access thereto and every reasonable opportunity "to inspect and examine materials and take measurements shall be afforded by the "management to the officers of the Public Works Department.

"80. *Payment of grant.*—(i) Before the grant is paid it shall be certified in the "prescribed form [note (B), page 82] by the Engineer or other responsible officer "deputed to examine the building, that the work has been completed in accordance "with the approved plan and estimate, or that the building is worth the amount "on which the grant is claimed. Such certificate shall be countersigned by the "Director.

"(ii) Before the grant is paid the owner (or, in cases in which the permission "of the Director has been obtained, the management) may be called upon to execute "a mortgage of the property or a deed of acceptance in respect of the grant, as may "be required. Until further orders the forms of the various deeds shall be as "described in Appendix XXVIII.

"(iii) The grant shall be drawn on a bill prepared in the prescribed form "(Appendix XVII).

"81. *Claims of the Government.*—If a building, for which a grant has been "drawn, has, prior to the lapse of twenty years from the date of payment of the "grant, been diverted to other purposes than educational purposes approved by the "Government, the manager shall refund such portion of the grant as may be "determined by Government. If the manager fail to make such refund, the Govern-"ment may recover the amount by such means as they may think fit to take.

"82. *Grants by whom sanctioned.*—Grants exceeding Rs. 1,000 are sanctioned "by the Government; grants of Rs. 1,000 and under by the Director."

Office Note.

87. As stated in page 44 ante, Mr. Tressler has adopted the old set of rules for the purpose. Apparently, he was not aware of the revision carried out in these rules recently and already published. In adopting the old rules he has not introduced any innovation, but merely follows the rules applicable to ordinary school buildings. It is therefore submitted that the revised rules (a copy of which is attached below) * may be substituted for this section. The revised rules provide for grants for extensive alterations and repairs to buildings, for payment of advances, for increasing the period of mortgage of the property to the Government to forty years, etc. The only alteration which Mr. Tressler seems to have intentionally made is the omission of grants for the acquisition of sites for the erection of buildings. There seems to be no reason why this should be done. The provision in the ordinary Code regarding these matters may therefore be restored.

G.O. 370, Educational, 1st May 1912, and G.O. 868, Educational, 22nd July 1914.

* Chapter VIII of the Grant-in-Aid Code.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

A reference may be made to Mr. Tressler on paragraph 81 on the lines of the note.

P. Rajagopala Achariyar—4-7-15.

[Paragraph 11 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

Paragraphs 77 to 82.—The paragraphs may be re-arranged in accordance with the revised Grant-in-Aid Code as per enclosed.

51

Building Grants.

77. *Applications for aid.*—(i) Applications in the prescribed form (Appendix XIV) shall be submitted accompanied by such outline plans as will enable the Director to judge of the suitability of the proposal from an educational point of view. The Director shall inform the correspondent whether he is prepared to consider the question of a grant, making, if necessary, alterations of the plans a condition of his so doing.

(ii) If the Director's reply be favourable the correspondent shall then submit to him, in duplicate, detailed plans, specifications and estimates (which may include architect's and draughtsman's fees) prepared by a professional person. When a grant has been promised in respect of any building, the management shall, prior to the commencement of work thereon, give 15 days' notice in writing to the Executive Engineer in charge of the division wherein it is proposed to construct the building.

(iii) During the progress of the work, access thereto and every reasonable opportunity to inspect and examine materials and take measurements shall be afforded by the management to the officers of the Public Works Department.

78. *Object and proportion of aid.*—(i) Grants may be sanctioned for the following purposes:—

(*a*) Purchasing, erecting or enlarging school houses or buildings or students' hostels including residential quarters for the warden or other staff attached to the hostel.

(*b* Executing extensive alterations and repairs to buildings which have been newly purchased for school purposes.

(*c*) Acquiring land for school or hostel purposes.

(ii) Grants shall not generally be given for a building which has not been completed by the time fixed in the order sanctioning the grant.

79. *Amount of grant.*—(*a*) The grant promised shall not exceed one-half of the total cost of the work stated in the management's estimates as approved by the Director and modified by the Public Works Department.

(*b*) The amount of grant to be actually disbursed shall be regulated by the actual cost of the work as finally completed. The grant promised with reference to the approved plans and estimates will be the maximum that will be paid, but the amount to be disbursed shall in no case exceed one-half of the actual cost of the work as finally executed. Before making payment the Director will require the management to furnish vouchers or certificates showing the actual amount expended by them in completing the work.

80. *Payment of grant.*—(i) Before the grant is paid it shall be certified in the prescribed form [note (B), page 82] by the Engineer or other responsible officer deputed to examine the building, that the work has been completed in accordance with the approved plan and estimate, or that the building is worth the amount on which the grant is claimed. Such certificate shall be countersigned by the Director.

(ii) Before the grant is paid the owner (or, in cases in which the permission of the Director has been obtained, the management) may be called upon to execute a mortgage of the property or a deed of acceptance in respect of the grant, as may be required. Until further orders the forms of the various deeds shall be as described in Appendix XXVIII.

(iii) The grant shall be drawn on a bill prepared in the prescribed form (Appendix XVII).

80-A. *Conditions of grant.*—(i) In the case of new buildings, extensions or alterations, the Director must have been convinced of their necessity and have approved their character. In the absence of the special permission of the Director or the Government these must not have been commenced before the sanctioning of the grant.

In the case of purchases of land or buildings the Director must either have been consulted before the purchase was made or be convinced that land previously purchased is to be newly devoted to an educational purpose.

164, Home (Edn.)—20

(ii) Rooms in school and hostel buildings for the construction of which a grant is sought must be of not less than the following dimensions :—

Dormitories must be large enough to allow, if for a single pupil, 80 superficial feet and 900 cubic feet, if for more than one pupil a proportionately diminishing space down to 30 superficial feet and 400 cubic feet per head for ten or more pupils. A space of at least 8 superficial feet and 80 cubic feet per head should be provided in every room used as a class room, dining room or for any other dwelling purposes other than sleeping.

81. *Claims of the Government.*—If a building, for which a grant has been drawn, has, prior to the lapse of twenty years from the date of payment of the grant, been diverted to other purposes than educational purposes approved by the Government, the manager shall refund such portion of the grant as may be determined by Government. If the manager fail to make such refund, the Government may recover the amount by such means as they may think fit to take.

82. *Grants by whom sanctioned.*—Grants exceeding Rs. 2,500 are sanctioned by the Government ; grants of Rs. 2,500 and under by the Director.

Further Office Note.

Please see page 75 and draft revised rules on page 76 ante. In accepting the proposal to adopt the rules in the *existing* Grant-in-Aid Code in regard to building grants, Mr. Tressler has re-arranged those rules and has also left out certain portions. The re-arrangement need not, it is submitted, be objected to. The omissions and alterations are noticed below :—

New rule 77.—This is exactly similar to rule 52 of the Grant-in-Aid Code except the omission of (1) the words "through the Inspector" in sub-paragraph (1) and (2) the following note which occurs at the end of the rule :—

"Any correspondent contemplating building operations for which he desires "a grant from Government should apply to the Inspector for (1) a form of applica- "tion for grant and (2) instructions for the preparation of plans and estimates."

It seems necessary that the applications should come through the Inspector, who will then have an opportunity of scrutinizing it and recording his recommendations thereon.

As the plans and estimates submitted with building grant applications were often found to be very defective the Public Works Department have issued a special circular embodying instructions for their preparation and it was decided that managers of schools should be guided by these in the preparation of plans and estimates. The note was accordingly inserted in the Code—please see G.O. No. 1048, Educational, dated the 17th November 1913. The note seems useful and may be embodied in the Industrial Code also.

New rule 78.—Clause (ii) of this rule does not find a place in the existing Code. It was in the Code before the rules were revised in 1912 but was purposely left out as being unnecessary. The rule prescribing a date for the completion of the building was seldom observed and applications for the extension of the period were numerous and had to be granted as a matter of course. It does not therefore seem to be desirable to retain the rule in the new Code.

New rule 80.—This is similar to rule 53 of the Grant-in-Aid Code with the omission of the words "in full" in the first line and of a clause at the end. This clause runs as follows :—

"Advances may be made from time to time out of the sanctioned grant "provided that the Director is satisfied that the working is proceeding satisfactorily."

This clause was specifically introduced when the rules were revised in 1912. It appears to be desirable to retain it in the new Code also ; similarly the words "in full."

With reference to G.O. No. 1290, Educational, dated 16th November 1914, sub-paragraphs (ii) and (iii) of this rule and new rule 79 have been recently altered so as to provide separately for the purchase of buildings and lands. These alterations may be adopted here.

New rule 81.—This is similar to rule 55 of the existing Code. But in the latter, the period of twenty years prescribed as the period during which the building should not be diverted to other purposes has recently been raised to forty. Please see G.O. No. 868, Educational, dated 22nd July 1914. Mr. Tressler does not embody this alteration. It may, it is submitted, be altered accordingly :—

New rule 82.—The Director of Industries has been authorized to sanction building grants only up to Rs. 1,000. Please see G.O. No 1194, Educational, dated the 24th October 1914. The figure "2,500" occurring in the rule may be altered into "1,000".

C.R.—11-10-15.

Make this a separate chapter and reproduce the Code with an introductory paragraph and the necessary changes in italics.

C. G. TODHUNTER—30-10-15.

"*Furniture Grants.*

"83. *Application for aid.*—Applications for furniture grants must be made in "the prescribed form (Appendix XV) and shall be accompanied by details showing "the number, description, and price of each article which it is proposed to provide. "If any allotment is required during the year, applications must reach the Director "before April 1915."

Office Note.

88. As in the case of ordinary grants it may be ruled that applications for furniture grants must be made through the Inspector. This seems to be necessary to avoid a further reference to that officer which may be inevitable.

Article 15 of the Grant-in-Aid Code.

Secretary's Note.

I would leave this alone.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Make this again a separate chapter and reproduce the Code with verbal alterations in italics.

C.G.T.—30-10-15.

"84. *Object and proportion of aid.*—(i) Grants not exceeding one-half of the total "cost may be given for furniture, and for appliances, tools, machinery and workshop "fittings ; for books and non-Indian periodicals for school libraries; and for the cost "of preparing work for exhibitions.

"(ii) Grants shall not be given to meet the cost of seats or desks of a pattern "which has not been approved by the department, or for books of the value of eight "annas and under.

"(iii) Grants shall not be given for articles regarding which the Director has "not been consulted and for which aid has not been promised previously to purchase "or manufacture."

Office Note.

89. (i) With reference to the note under paragraphs 4 and 25 of this Part, the words "for gymnasia and games" * may be inserted before the word "and" ; and the words "cost of industrial exhibitions and of preparing work for such exhibitions" may be substituted for the words "cost of preparing work for exhibitions."

* Article 57 (i) of the Grant-in-Aid Code provides for this.

Yes.

P.R.—4-7-15.

No.

P.R.—4-7-15.

(ii) The words "or for books of the value of eight annas and under" may be omitted, as they have been similarly omitted in the revised edition of the Grant-in-Aid Code.

Article 57 (ii) of the Grant-in-Aid Code.

P.R.—4-7-15.

P.R.—4-7-15. Clause (iii) does not call for any remarks.

S.K.—15-6-15.

C.R —20-6-15.

"85. *Payment of grant.*—The grant shall be paid only on submission, before "the date specified in the order sanctioning the grant, of vouchers duly receipted. It "shall be drawn on a bill prepared in the prescribed form (Appendix XVIII).

"86. *Claims of the Government.*—If an institution which has received aid under "this chapter, is closed within five years from the date on which a grant under this "chapter is drawn, the Government shall be at liberty to purchase the articles, towards "the supply of which the grant was given, at a valuation to be made by an officer to "be deputed by the Government for the purpose.

"87. *Grants by whom sanctioned.*—Grants exceeding Rs. 1,000 are sanctioned "by the Government; grants of Rs. 1,000 and under by the Director."

Office Note.

P.R.—4-7-15. 90. These may be accepted.

S.K.—15-6-15.

C.R.—20-6-15.

Office Note.

91. Before closing this Part it is submitted that if the proposals to retain the provision for making grants to endowments are approved, the following adaptations of the rules 61 to 64 of the Grant-in-Aid Code in respect of this matter may be embodied in the Code:—

Note under paragraph 4 of Part II, page 66 *ante*.

GRANTS TOWARDS ENDOWMENTS.

"88. *Object and proportion of aid.*—Grants not exceeding one-half the amount "given or devised may, with the sanction of the Government, be made for the endow-"ment of scholarships, laboratories, workshops, museums and other educational "objects.

"89. *Conditions of aid.*—The following are the conditions under which grants "shall be given:—

"(i) The endowment shall consist of Government securities to be invested "in the names of trustees approved by the Government.

"(ii) The endowment must not be created from moneys derived either "directly or indirectly from ordinary funded or school income.

"(iii) The trust-deed, which must be approved by the law officers of the "Government, shall contain a provision that, in the event of the object for which the "endowment was created ceasing to exist, or of the management ceasing to comply "with any of the conditions of the trust, the fund shall be distributed as provided "therein.

"(iv) The trustees shall render yearly accounts to the Director in the "prescribed form (Appendix XIX).

"90. *Payment of grant.*—The grant shall be drawn on a bill prepared in the "prescribed form (Appendix XX).

"91. *Limits in the case of grants for prizes.*—No grants shall be given towards "any prize endowment of the value of under Rs 1,000, nor shall the amount of grant "given towards any prize endowment exceed Rs. 1,000."

Secretary's Note.

I have already said that a reference should be made to Mr. Tressler about this.

P. RAJAGOPALA ACHARIYAR.—4-7-15.

[Paragraph 4 of demi-official No. 744, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

Chapter XI of the Grant-in-Aid Code may be added as it stands on page 32 to follow paragraph 87, the appendix letters being however changed from V and W to XIX and XX and the subsequent appendices being numbered accordingly.

Further Office Note.

The draft paragraphs 88 to 91 above which have been *adapted* from chapter XI of the Grant-in-Aid Code, will meet the requirements of industrial schools. It will not be necessary to import wholesale the whole Chapter from the Grant-in-Aid Code. Clause (v) of rule 62 is inapplicable to industrial schools and has been omitted.

C.R.—11-10-15.

I would keep the Code as it stands unless there are very strong reasons for altering it.

C. G. TODHUNTER—30-10-15.

PART III—INDUSTRIAL EDUCATION.

Examinations, Certificate and Courses.

Office Note.

92. This part which lays down rules regulating examinations, grant of certificates and the fixing of courses does not seem to be open to much criticism.

P.R.—4-7-15.

PART III

CHAPTER I.—EXAMINATIONS AND CERTIFICATES.

(*Regular Courses.*)

"1. In the regular courses of Industrial Education examinations are held as "follows:—

"Examinations for Industrial School-leaving certificate on the completion of the practice "stage.

"Examinations for journeyman's certificate on the completion of the workshop stage or "practical course.

"Examinations for craftsman's certificate on the completion of the workshop stage *plus* "the theoretical course.

"In addition there is a High Proficiency examination (vide paragraphs 9 and "31).

"2. The Industrial School-leaving certificate is a continuous record of a pupil's "progress similar to the Secondary School-leaving certificate in the Department of "Public Instruction. It must be posted regularly by the school authorities. The final "examination will be held twice a year in April and October, by the school authorities "in the school itself and the results of the examination will be communicated to the "Inspector. On his next visit he will verify the results by a personal inspection or "examination of the pupils and their papers and will, if satisfied, endorse the certifi-"cate. If he does not regard any pupil, though passed, as fit for a certificate he may "put him back one or more terms.

"A pupil will not be certified as having secured the Industrial School-leaving "certificate unless he can produce a Lower Elementary certificate of general educa- "tion.

"3. *The Journeyman's examination* for which apprentices will enter on completing "the prescribed journeyman's period of training under the school system will be held "twice a year in May and November and will be conducted by a Board of Examiners "appointed by Government. The examination will be held in Madras and, if neces- "sary, also in Madura and Bezwada. It will be of an entirely practical character, "and will last about a week. There will be two kinds of passes, ordinary and with "distinction.

"4. Under the apprenticeship system practical experience is acquired in a work- "shop and an apprentice obtains only his theoretical training in the school. Appren- "tices who have received their practical training in this manner may however present "themselves for the journeyman's examination if they wish to do so, subject to the "conditions laid down in the next paragraph.

"5. *Application for admission* to the examinations described in the preceding "section must be made to the Director of Industries not later than 15th March or 15th "September in each year. Forms of applications for this, and all other departmental "examinations may be obtained from the Director of Industries (Appendix XIX). "The admission fee is Rs. 2-8-0. Applicants for admission to the journeyman's "examination must submit a copy of the Industrial School-leaving certificate and a "certificate from the manager of the industrial school at which they are studying "to the effect that they have finished the prescribed course of practical training.

"Apprentices trained in a workshop must, in lieu of the above certificates sub- "mit a declaration signed by their employer to the effect that they have undergone a "period of apprenticeship at least equivalent to that prescribed in paragraph 29 for "the craftsman's certificate. They must also submit a certificate of conduct from the "principal of the school last attended and must adduce evidence of general education "not lower than the fourth form.

"6. *The craftsman's examination* for which journeymen will enter on the comple- "tion of their theoretical training, will be held twice annually in May and November, "immediately after the journeyman's examination, and will be conducted by a Board "of Examiners appointed by Government. The examination will be held in Madras "and, if necessary, also in Madura and Bezwada and will be written and oral, but the "examiners will not be precluded from applying practical tests if these are considered "necessary. There will be two kinds of passes: ordinary and with distinction.

"7. *Application for admission* to this examination must be made as in paragraph 5. "The admission fee is Rs. 5. With this application a candidate must submit a copy "of the craft qualification (fourth form) certificate and of their journeyman's certifi- "cate if they already possess one. Only candidates who have been duly registered as "pupils in a recognised industrial or trade school will be allowed to enter for this "examination.

"8. The craftsman's certificate constitutes a dual qualification, theoretical and "practical, and will not be awarded unless candidates satisfy the examiners in both "branches. The two examinations may, however, other conditions being satisfied, "be taken independently.

"9. *High Proficiency* examinations, practical or theoretical, will, when necessary, "be held simultaneously with the journeyman's and craftsman's examinations respect- "ively. No candidate will be allowed to enter for these examinations less than one "year after obtaining his journeyman or craftsman's certificate (vide paragraph 31).

"10. *Application for admission* must be made as in paragraph 5. The admission "fee is Rs. 5. With their application candidates must submit copies of their jour- "neyman or craftsman's certificate, without which qualification they will not be "allowed to appear for examination at all. If the candidates pass the examination, "their journeyman or craftsman's certificate will be given a high proficiency endorse- "ment but no separate certificate will be awarded.

"11. No examinations will be held and no certificates (beyond certificates of "attendance) awarded in connection with any classes or courses other than those "above specified.

"12. The public examinations will be held by a body of examiners nominated by "an Examination Committee and approved by Government. The Examination Com- "mittee will consist of seven members, the Director of Industries being ex-officio "Chairman and the Inspector of Industrial Schools ex-officio Secretary. Members, "who should be representative employers of labour, will retain their position on the "committee so long as they continue in the post held on election or until they resign "or are requested to do so by a majority of the other members. Vacancies thus "caused will be filled by election amongst the members themselves, the new appoint- "ment being subject to the approval of Government. The Director of Industries and "Inspector of Industrial Schools are ex-officio President and Secretary of the Board "of Examiners but cannot actually undertake examination work though they are em- "powered to attend examinations. There is nothing to prevent other members of the "committee being elected as examiners.

"13. The committee will nominate examiners to the number of at least two for "each subject (or three if the number of candidates exceeds 50) and examiners will "be appointed annually."

Office Note.

93. Mr. Tressler proposes to break away completely from the present system of Government Technical Examinations and to substitute instead examinations for each course of study in the industrial schools conducted by a separate board of examiners. In his original note of 1912 also Mr. Tressler pointed out that the existing Government Technical Examinations did not test the practical ability of individual students and proposed that new examinations should be substituted for the industrial school courses. The present proposal of Mr. Tressler is supported by both the committees which considered the scheme. The proposals may be accepted for the present.

Page 12 of G.O. 833, Educational, 16th July 1914.

P.R.—4-7-15.

The only point that requires notice is the constitution of the examination committee referred to in paragraph 12. The composition of this committee was recommended by the conference. There seems to be no objection to it. But in the first place it seems to be necessary to fix the period of tenure of office of the members of the Examination Committee as has been done in the case of the Secondary School-leaving Certificate Examination committee and the European School Examination Board; and especially where non-officials will have to be appointed it seems necessary to retain the course by which their removal can be effected. The draft Code lays down that the members "will retain their position on the committee so long "as they continue in the post held on election or until they resign or are requested to "do so by a majority of the other members." It is not understood what is meant by the expression "continue in the post held on election." It should also be necessary to give some power to the Government to remove the members. All this difficulty will be very much minimised if a committee is appointed for a definite period, say, for three years.

G.O. 511, Educational, 12th June 1912, and G.O. 269, Educational, 3rd May 1909.

I agree. Mr. Tressler may be asked about it.

P.R.—4-7-15.

[Paragraph 12 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

12. The tenure may be fixed at three years.

Further Office Note.

The third and fourth sentences of paragraph 12 may be replaced by the following :—

" Members who should be representative employers of labour will be appointed " for a period of three years "

S.K —11-10-15

Paragraph 2.—In the second sub-paragraph for the words " unless he can produce a lower elementary certificate of general education " the words " unless he can produce a certificate from the headmaster of a recognized school to the effect that he has received an elementary education up to the fourth standard " may be substituted.

Paragraph 5.—In the second sub-paragraph it is stated that apprentices trained in a workshop must for admission to the journeyman's examination adduce evidence of general education not lower than the fourth form. This however does not appear to be consistent with what has been stated elsewhere on this point. According to the Code the fourth form certificate is required only for admission to the *theoretical stage* on completion of which the craftman's certificate is issued. For the journeyman's examination this qualification is not required in the case of students who appear for it from industrial schools. It is not clear why it should be insisted on in the case of apprentices seeking admission for that examination. According to the Code students from industrial schools appearing for the journeyman's examination will have only general education of the fourth *standard*. The same qualification may be laid down in the case of apprentices seeking admission to that examination. The words " and must adduce evidence of general education not lower than the fourth form " may be omitted.

Paragraph 7.—The words " craft qualification (fourth form) " may be replaced by " higher general education ".

C.R.—11-10-15.

Secretary's Note.

A sectional note that treats 13 sections *en bloc* loses its value as such. I accept the above proposals, subject to the following changes :—

(i) *Paragraph* 1.—Omit the last sentence.

(ii) *Paragraphs* 3 *and* 6.—Substitute the words " at other stations to be notified " for " in Madura and Bezwada."

(iii) *Paragraph* 5.—Replace the last sentence of the first sub-paragraph by the following :—

" Every applicant for admission to the journeyman's examination must " submit a copy of his school-leaving certificate and a certificate from the manager of " the industrial school at which he is studying to the effect that he has finished the " prescribed course of practical training."

Begin the second sub-paragraph with the words " Every apprentice " for " apprentices " and change the number of the pronouns and verbs referring to the " word " apprentice " into the singular.

(iv) *Paragraph* 7.—In the third sentence replace the word " this " by " his " and insert " each " after " application "; omit the words " of the craft " qualification (fourth form) certificate and "; substitute " his ", " he " and " possesses " for " their ", " they " and " possess " respectively ; and add the following at the end :—

" together with evidence of general education up to the fourth form ".

(v) *Paragraphs* 9 *and* 10.—Omit these two paragraphs.

(vi) *Paragraph* 12.—Substitute the following for this paragraph :—

" 12. The public examinations will be conducted by a body of examiners " appointed by Government on the nomination of the examination committee. The " examination committee will consist of seven members, the Director of Industries " being ex-officio Chairman and the Inspector of Industrial Schools ex-officio mem- " ber and Secretary. The remaining members will be appointed by Government and " will hold office subject to the approval of Government for three years. Preference

" will be given to representative employers of labour. The Director of Industries " and the Inspector of Industrial Schools will not actually undertake examination " work, though they are empowered to attend examinations. There is nothing to " prevent other members of the committee being appointed examiners ".

(vii) *Paragraph* 13.—Omit " and " and make the words that follow into a separate sentence.

C. G. Todhunter—30-10-15.

PART III

Chapter II.—Stipends, Scholarships and Rewards.

" 14. *Stipends* are not ordinarily awarded by the State in connection with the " regular courses of industrial education, though managers of industrial schools may " allow stipends to pupils out of their own funds in accordance with the rules laid " down in Part II, paragraph 53.

" Similarly employers of labour who are desirous of sending their apprentices to a " trade school but find it impossible to induce them to attend otherwise may, at their " own expense, allow stipends to their apprentices, subject to the same conditions as " above stated. The procedure is regarded as wrong in principle and will be discour- " aged as far as possible by the Director ; in certain trades, however, it appears that " the giving of stipends to apprentices to make them attend classes is a universal " necessity. If this fact is agreed upon by the Director and the employers in that trade, " a standard rate of stipend will be fixed and employers will be reimbursed by " Government at the standard rate for all stipends paid to such apprentices as may be " admitted to a Government trade school for training.

" 15. *Scholarships.*—With the exception of the special trade scholarships (Part I, " paragraph 40) scholarships are awarded only to pupils of industrial schools and only " in connection with the regular courses of training. No scholarships are awarded for " special classes. Scholarships are reserved for pupils of promise whose pecuniary " circumstances are certified by the head of the school to be such as to prevent them " from prosecuting their studies without assistance. The claims of those sections of " the community who are most in need of aid, will, other conditions being satisfied, " be first considered.

" The number of scholarships available will be notified in the *Fort St. George* " *Gazette* about the middle of March. Forms of application (Appendix XXIII) and " other particulars may be obtained from the Director of Industries. "

Office Note.

P.R.—4-7-15. | 94. These do not seem to call for any remarks.

Further Office Note.

Paragraph 14.—In the second sub-paragraph the first sentence alone need be retained. The rest of the paragraph may perhaps be omitted as being a statement of policy.

C.R.—11-10-15.

" 16. *Lower scholarships.*—Scholarships will be awarded in the practice stage " of practical instruction in industrial schools. No scholarship will be awarded for " the first year (half time) but for subsequent periods the rate is as follows :—

" Awarded at end of first year (half time) tenable during second year (half time), Re. 1.

" Awarded at end of second year (half time) tenable during third year (half time), Rs. 2.

" Awarded at end of third year (half time) tenable during fourth year (half time), Rs. 3.

" Full time pupils qualify for double this amount but no individual can draw " scholarships for more than the equivalent of a four years' half-time course (two years' " full time).

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"17. *Application for scholarships.*—The scholarships will be awarded on the "results of the annual school examination and for this purpose a list of results shall "be sent to the Inspector of Industrial Schools as soon as possible after the examina- "tion and not later than May 1, together with applications for scholarships prepared "by the manager on the prescribed form (Appendix XXIII).

"18. No pupil failing to secure 66 per cent of marks or a first-class pass will be "eligible for a scholarship. In calculating marks, the year's work is to be taken into "account, two-thirds of the maximum total being allowed for examinations and one- "third for the year's work.

"19. *Award of scholarships.*—With the reservation mentioned in paragraph 15 "scholarships will be awarded in order of merit and the award will be notified in the "*Fort St. George Gazette* about the end of May.

"20. *Payment of scholarships.*—Scholarships will be drawn monthly by the "manager on behalf of scholarship holders. Bills must be prepared in the prescribed "form (Appendix XXIV) and presented at the local treasury for encashment.

"21. *General conditions.*—No pupil shall be allowed to hold at the same time "more than one scholarship. If eligible for more than one, he shall elect which he "will hold, and the scholarship thus set free will be awarded to the next most "deserving student. For the purposes of this rule a Government stipend is ordinarily "to be regarded as a scholarship, but in special cases the Director may permit a "scholarship holder to draw a Government stipend also.

"The candidate shall bind himself to prosecute his studies in the subject in "which he has passed and for which he is to receive a scholarship in a recognized "industrial school.

"If a scholar ceases to attend a class the fact must immediately be reported and "the scholarship will be stopped.

"Any scholarship vacated in the course of the period for which it is tenable may "be awarded for the remaining period to an eligible applicant in the same year of "study as the holder of the scholarship vacated.

"Where the order of merit cannot be clearly ascertained, the Director may at his "discretion order a further competitive examination among those who are eligible for "scholarships.

"All scholarships tenable under the above rules are liable to forfeiture, for idle- "ness, misconduct, irregularity in attendance or failure to make due progress or to "secure annual promotion.

"Scholarships are valid for one calender year unless the contrary is expressed, "and run from 1st June to 1st June.

"22. *Higher scholarships.*—In schools where the "workshop" stage is not "recognized pupils passing the Industrial School-leaving certificate examination and "desirous of continuing their education in another school may, on the recommenda- "tion of the manager and at the discretion of the Director of Industries, be allowed "journey man's scholarships of Rs 3 per mensem. This sum will be increased to "Rs. 5 if candidates possess the craft qualification certificate (fourth form) and take "up a theoretical course.

"23. *Application for scholarships.*—The scholarships will be awarded on the "results of the Industrial School-leaving examination. The procedure in application "is as laid down in paragraph 17.

"24. *Award of scholarships.*—Scholarships will be awarded as laid down in para- "graph 19, but is subject to the Inspector's subsequent approval of the examination "results. If the results are not approved the scholarship will be stopped, but no "recovery will be made of any money already disbursed.

"25. *Payment of scholarships.*—When scholarships are held in an industrial "school the amount will be drawn by the manager as laid down in paragraph 20. "When scholarships are held at a Government trade school the amount will be "disbursed to the scholarship holder at the end of every month by the Principal.

"26. *General conditions.*—To these scholarships the same conditions apply as "those above specified—the scholarships are however ordinarily tenable for three "years or the full period of workshop apprenticeship, whichever is less. The enhan- "ced value of the scholarship is however only payable during the period covered by "the theoretical course.

"Pupils studying in school where the workshop stage is recognized, qualify for "similar scholarships if they possess the craft qualification certificate and wish to "continue their training in a Government trade school.

"27. Scholarships of the value of Rs. 5 per mensem may also be awarded to "promising apprentices in indigent circumstances who have not attended an industrial "school and wish to undergo a course of training in a Government trade school (vide "Part I, paragraph 40)."

Office Note.

95. The industrial scholarships now granted by the Government are regulated by the notification published annually in the *Fort St. George Gazette*. The basis on which the scholarships are given and the conditions of their grant as laid down therein undergo in the draft Code complete modification as the character and details of education have been fully altered. Where general rules are laid down those have been embodied in the Code.

The grant of the scholarships under the present notification varies from Re. 1-8-0 to Rs. 9 tenable in the various classes. According to the Code scholarships of the value ranging from Re. 1 to Rs. 3 will be awarded to half-timers in the "Practice" stage and of double the value to full timers. In the workshop stage a scholarship of Rs. 3 per mensem will be awarded and where the pupil takes up the theoretical course, the scholarship is raised to Rs. 5. These rates may, it is submitted, be tentatively accepted.

P.R.—4-7-15.

S.K.—11-10-15.

C.R.—11-10-15.

"28. *Rewards.*—All candidates passing the journeyman's examination with dis- "tinction will receive a reward of Rs. 10 and those passing the craftsman's examina- "tion with distinction Rs. 15. All candidates securing high proficiency certificates "will also receive a reward of Rs. 15."

Office Note.

96. The grant of rewards is for the first time introduced in the scheme of industrial education. It is apparently intended to be an incentive to the pupil to qualify. There seems to be no objection to accept this proposal. The financial effect of these rewards is not stated. Apparently it would not be much.

P.R.—4-7-15.

Further Office Note.

Paragraphs 15 *to* 28.—A new scheme of scholarships and rewards is proposed here. This has not yet been approved by Government As has already been suggested all reference to this scheme may perhaps be removed from the Code. The scheme may be considered separately and, if approved, it may be embodied in the scholarship notification published every year in the *Fort St. George Gazette*. It will be sufficient if the following paragraph is put in in the Code:—

"The number and value of scholarships available in technical schools and the "conditions attached thereto will be notified every year in the *Fort St. George* "*Gazette*."

C.R.—11-10-15.

Secretary's Note.

I agree. Further stipends having been dealt with elsewhere, we may cut out this chapter altogether and add the above rule at the close of the previous chapter.

C. G. TODHUNTER—30-10-15.

PART III

Chapter III.—Regular Courses.

(Complete course of training.)

29. The regular courses of training are fully set forth in the appended table.

"*Schedule of regular (complete) courses of Industrial Education.*

Name of journeyman's course.	Practical course for journeyman's certificate.					Extra theoretical course for craftsman's certificate.				Name of craftsman's course.
	School system.				Apprentice system.	Minimum period of apprenticeship for certificate.		Theoretical course.		
	Practice stage—Name of class.	Duration.	Workshop stage—Name of class.	Duration	Period of workshop training.	School system.	Apprentice system.	Duration.	Number of subjects.	
		yrs.		yrs.	yrs.			yrs.		
Turner's and fitter's work.	Mechanical work.	2	Fitter's and turner's work.	3	4	5	4	2	4	Mechanic.
Blacksmith's work ..	Do.	2	Blacksmith's work.	3	4	5	4	2	4	Do
Foundry work ..	Do.	2	Foundry work.	3	4	5	4	2	4	Do.
Electric fitting ..	Do.	2	Electric fitting.	3	4	5	4	2	3	Electrician.
Metal work	Do.	2	Metal work ..	2	3	4	3	1	2	Metal worker.
Plumbing	Do.	2	Plumbing ..	2	3	4	3	1	4	Plumber.
Carpentry	Wood work ..	2	Carpentry ..	3	4	5	4	2	3	Carpenter.
Joinery	Do	2	Joinery ..	3	4	5	4	2	3	Do.
Cabinet making ..	Do.	2	Cabinet making	3	4	5	4	2	3	Do.
Compositor's work ..	Printer's work.	2	Printer's composition.	3	4	5	4	2	1	Compositor.
Proof reading ..	Do.	2	Proof reading ..	2	4	5	4	2	2	Proof reader.
Press work	Do.	2	Press work ..	3	4	5	4	2	2	Press worker.
Bookbinding	Bookbinding work.	2	Bookbinding ..	3	4	5	4	2	1	Bookbinder.
Printer's warehouse work.	Do.	2	Printer's warehouse work.	2	4	5	4	2	1	Printing warehouse man.
Boot making ..	Leather work ..	2	Boot making ..	2	3	4	3	..	1	Boot maker.
Harness making ..	Do. ..	2	Harness making	2	3	4	3	..	1	Saddler.
Dress making ..	Needle work ..	2	Dress making ..	2	3	4	3	2	2	Dress maker.
Embroidery	Do. ..	2	Embroidery ..	2	3	4	3	2	2	Embroiderer.
Pillow lace work ..	Pillow lace work.	2	Pillow lace work.	2	4	4	3	2	2	Lace maker.
Tailoring	Tailoring ..	2	Tailoring ..	3	4	5	4	1	1	Tailor.
Handloom weaving ..	Hand-loomweaving.	2	Hardloom weaving.	2	3	* 4	3	2	2	Hand-loom weaver.
Carpet weaving ..	Carpet weaving.	2	Carpet weaving.	2	3	4	3	2	2	Carpet weaver.
Agriculture	Will be dealt with by Agricultural Department.									

* *Vide* Vol. II, page 3.

Office Note.

97. The course prescribed in this chapter seems acceptable.

It may be repeated here, if necessary. I would not omit it in the other place.
P.R.—4-7-15.

As already stated in the note under paragraph 43, page 52 supra, the rule prescribing "drawing" as a compulsory subject of training may be brought over here.

P.R.—4-7-15.

The last item "Agriculture" may be omitted from this schedule.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Agriculture should certainly be omitted and the fact that drawing is compulsory brought in. The introductory sentence might be made clearer, e.g.

"The regular courses of training which will be recognized in industrial schools are set forth in the following table."

C. G. Todhunter—30-10-15.

PART III

Chapter IV.—Special Classes.

"30. Apart from the regular courses of Industrial education specified in the last "paragraph, special classes will also be arranged. These are of five kinds—

"(1) Popular lectures.
"(2) Trade Instruction classes.
"(3) Extension classes.
"(4) High Proficiency classes.
"(5) Theoretical classes.

"31. In contrast to the regular courses of education which are made up of various "elements and represent a composite and complete whole, special classes do not form "an integral part of a course of training but are complete in themselves.

"*Popular lectures*—are lectures on practical or technical subjects treated in a "popular manner and are open to any individual who chooses to attend them.

"*Trade instruction classes*—are elementary practical classes in handicraft, open to "any *bona fide* artisan who wishes to learn something about a trade.

"*Extension classes*—are practical classes of a more specialised character intended "for and open only to individuals who are already practically engaged in the trade to "which the teaching applies.

"*High Proficiency classes*—(which may be either theoretical or practical) are "classes of an advanced character, admission to which is limited to individuals who "already hold a craftsman's or journeyman's certificate.

"*Theoretical classes*—are classes in subjects which do not form part of a regular "course of Industrial Education.

"32. Industrial schools recognised up to the craftsman's stage in any subject "may, with the permission of the Director, introduce High Proficiency classes in that "subject, but no extra grant will be given on account of these classes. Trade "Instruction and Extension classes are absolutely prohibited in recognised Industrial "schools.

"In general no financial assistance will be given by Government to individuals "attending special classes. This rule may be waived by the Director in the case of "Extension classes if such assistance is found to be absolutely necessary.

"The Director is empowered to assist in the maintenance of Extension classes by "public bodies or private individuals if he is satisfied that a useful public purpose is "served thereby, but no general rules can be laid down on this point nor regarding "the character of the courses of instruction in the first three classes since these must "be determined entirely by circumstances.

"33. *Popular lectures*—will be arranged as required.

"34. *Trade Instruction classes.*—In addition to the subjects specified in column "2 (practice stage) of the statement in paragraph 29, Trade Instruction classes are "also provided in the following subjects:—

"Oil engine driving.
"Gas " "
"Steam " "
Motor car driving
Rattan work.
Electric wiring.

"These classes are open to any *bona fide* artisan. No fee is charged for admis- "sion. There is no examination and no certificates (except certificates of attendance) "will be awarded.

"35. *Extension classes*—are provided in the subjects specified in column 4 (work- "shop stage) of the statement in paragraph 29.

"These classes are open to any artisan engaged in the trade in which instruction "is given. No fee is charged for admission. There is no examination and no certi- "ficates (except certificates of attendance) will be awarded. The classes may, how- "ever, be regarded as preparatory for the journeyman's examination.

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"36. *High Proficiency classes*—are provided in the following subjects :—

Name of qualifying course.		Name of High Proficiency classes.	Character.	Duration (years).
Journeyman's.	Craftsman's.			
Fitting and turning	....	Motor fitting	P.	..
Do.	Machanics	Motor-car work	T.	..
Cabinet making	....	Cabinet making	P.	..
Presswork	....	Presswork	P.	..
Proof-reading	Proof reader	General Printing	T.	..
Pillow lace	....	Lace-making	P.	..
Tailoring	Tailors	Tailoring	T.	..
Hand-loom weaving	Hand-loom weaver	Dyeing	T.	..

"37. In addition to the theoretical instruction included in the regular course for "the craftsman's certificate, theoretical classes are also provided in the following "subjects :—

"Power-loom weaving. | Brickwork. Masonry work.

"38. Individuals trained in schools where high proficiency courses are recog- "nised may present themselves for examination in the high proficiency standard not "less than twelve months after obtaining their journeyman's certificate (in the case of "practical courses) or their craftsman's certificate (in the case of theoretical courses). "If they satisfy the examiners a 'high proficiency' endorsement will be made on the "journeyman's certificate they already hold subject to the condition that they shall "have been practically engaged in the trade in which they seek special certification "for the whole period intervening between the date on which they passed the "journeyman's examination and that on which they seek to be examined for high "proficiency."

Office Note.

98. This chapter lays down special courses which are outside the regular courses dealt with in this Code. These paragraphs do not seem to call for any special notice

P.R.—4-7-15.

Further Office Note.

Paragrah 32.—In the first sub-paragraph the last sentence may perhaps be omitted—vide note under paragraph 57 of Part II.

C.R.—14-10-15.

Secretary's Note.

The whole chapter may be omitted. Hign proficieney may well stand over for the present till we have got a standard of ordinary proficieney. The rest of the courses have nothing to do with the Code.

C. G. TODHUNTER—30-10-15.

PART III

CHAPTER V.—NORMAL TRAINING.

"39. Normal training will be provided by Government. Private institutions "will not ordinarily be permitted to undertake normal training.

"Training schools will be of only one kind, being institutions in which instruc- "tors are trained to superintend and direct work up to the journeyman stage. Such "teachers are termed second-class instructors. A higher technical course is however "provided to train teachers also for the teaching of theoretical subjects and teachers "who pass this examination are termed first-class instructors.

"Each training school will have a trade or industrial school teaching up to the "craftsman's standard attached to it and in both cases model workshop accommodation "will be available. A technical library will also be provided.

"40. The training schools will be under the general control of the Principal. "There will be a permanent staff, but a large part of the teaching will be done by "individuals who are actually engaged in the practice of the trades or profession in "which they teach and who only attend the school for lecture purposes for a few "hours a week.

"41. *Courses.*—The course for second-class instructors shall be as follows :—

"(1) Demonstration and instruction in model school.
"(2) Blackboard sketching.
"(3) Freehand and technical drawing and sketching.
"(4) Practical work in factories.
"(5) English
"(6) Science.
"(7) Workshop method and discipline.

"The courses for first-class instructors includes the following additional "features :—

"(8) Teaching technical subjects.
"(9) Elocution.
"(10) Extra science.

"42. *Period of training.*—The training will extend over a period of two years. At "the end of the first year it shall be determined, on the results of examination, which "of the candidates are fit for training as first-class instructors. These candidates "will be required to remain in the school for a further period of two years, making "three in all.

"43. *Qualifications for admission.*—Admission will ordinarily be limited to candi- "dates who have passed the craft examination with distinction. Candidates who have "passed the theoretical part of the examination with distinction but have not yet "finished the qualifying period of apprenticeship may, on the recommendation of their "employers, be admitted one year before the apprenticeship period is due to terminate.

"Every candidate for admission shall submit an application in the form "prescribed in Appendix XXII.

"The minimum age for admission is seventeen and the maximum twenty-five ; "it shall however be in the power of the Director, in very special circumstances to "admit a candidate whose age does not fall within the above limits.

"Candidates must also produce a letter of recommendation signed either by the "manager of the last industrial school attended or by their present employer. In the "latter case a certificate of conduct from the manager of the school (industrial or "general) last attended must also be furnished.

"Before actual admission the candidate must also submit a certificate of physical "fitness and health granted by a civil surgeon or other similarly qualified medical "authority.

"44. *Selection of candidates.*—The selection of candidates will lie with the "Principal of the Training School, who should take every care to exclude those that "appear to desire training merely for the sake of stipends and without any real inten- "tion of entering the teaching profession. Preference will be given to pupils who "possess educational qualifications above the prescribed minimum for the craftsman's "certificate (fourth form) subject to the condition that their practical attainments are "not below the average.

"45. *Fees and stipends.*—No fees will for the present be charged. Stipends will "be allowed at the rate of Rs. 12 per mensem for teachers undergoing training in the "courses for second-class instructors and Rs. 15 per mensem for those attending the "first-class instructor's course.

"The maximum number of stipendiaries permissible in a training school at any "one time is 20, but the Director has powers to increase the number in special cases.

"Subject to a limitation on total numbers under training, the Principal of the "Training School has powers to admit non-stipendiary pupils.

"The allotment of stipends rests with the Principal of the Training School, "who will see that the various classes of the population are fairly represented.

"46. *Probation.*—Every student shall be considered to be on probation, for 50 "working days; and if it shall appear to the Principal of the Training School that "any student is not likely to prove an efficient teacher, such student shall, with the "sanction of the Director, be required to leave the institution. During probation a "stipendiary student shall be entitled to draw the full amount of his stipend, and if "rejected at the end of the period of probation, he shall not be required to refund the "amount drawn, provided that his rejection was not due to moral delinquency.

"47. *Attendance and dismissal.*—(i) The Principal of the Training School may "give a student casual leave amounting to not more than seven days at a time, exclu- "sive of Sundays and other holidays, and to not more than fifteen days in the year. "In cases of real necessity, he may also, subject to the approval of the Director, give "additional leave, but it shall be leave without stipend. A student will forfeit one "day's casual leave for every four times that he is marked late

"(ii) A student shall forfeit all stipend during any period, however short, of "absence without leave, and may be dismissed if he is absent without leave for three "whole consecutive working days, or for a period aggregating five whole days in any "one term.

"(iii) The Director of Industries may grant leave without loss of stipend, for "a period not exceeding one month, to a student who is absent in consequence of "severe sickness certified to by a competent medical authority, or, where this is not "available, by the head of the institution. If the leave exceeds one month, no stipend "shall be granted for the excess period.

"(ix) A student may be dismissed by the controlling authority for continued "idleness, irregularity in attendance or serious misconduct; and, if so dismissed, he "may be declared unfit for employment as a teacher. If he is a stipendiary student, "he shall also be required to refund the whole amount drawn by him from Govern- "ment funds.

"48. *Examinations.*—At the end of the two years' course for second-class "instructors or the three years' course for first-class instructors an examination shall "be held at which all teachers under training must appear. On the results of this "examination first and second class instructors' certificates will be awarded.

"49. *Agreement to be entered with by students.*—Every student shall, before any "stipend is paid him, enter into an agreement, to be executed on stamped paper in the "form prescribed in Appendix XXVII.

"50. If, from any cause other than continued ill-health certified to by a recognis- "ed medical authority, a student fails to fulfil the conditions of the agreement he may "be declared to be unfit, absolutely or for a specified period, for employment as a "teacher. If a stipendiary student, he shall also be required to refund the whole "amount drawn by him from Government funds on account of stipend or such part of "it as the authority financially concerned considers equitable in the circumstances of "the case. A non-stipendiary student who has not already paid fees shall be required "to defray the cost of his training at the rate of Rs. 15 per term and to refund any "sum spent on his account.

"51. Teachers who hold a technical teachers' certificate under the old rules or "possess any other teaching qualification may apply for recognition without under- "going a regular course of normal training. These teachers will be examined and if "found competent will receive a third-class instructors' certificate."

Office Note.

99. As already stated, Mr. Tressler lays down the rules only for the Government institutions and precludes private or other management from opening and managing similar institutions. It has been pointed out that other agencies should also be allowed to undertake the management of similar institutions. To provide for such training a special set of rules provided for stipendiary and other grants seem necessary; and Mr. Tressler may be asked to formulate rules for that purpose. As regards the rules in this chapter they follow the same rules in the Educational Rules.

Regarding training schools the rate of stipends proposed for first and second class instructors under training, namely, Rs. 15 and Rs. 12, respectively, are those ordinarily allowed to collegiate and secondary grade teachers in training institutions. This rate will not seem to be very high for the qualifications demanded of candidates and for the length of the courses which is 3 and 2 years, respectively, as against the maximum period of 2 in the ordinary schools. This chapter does not seem to call for any further remarks.

Rule 118 of the Madras Educational Rules.

Secretary's Note.

I have already said that Government will, for a time at least, have to do the training of teachers and it is therefore unnecessary for the present to elaborate rules for *private* normal schools. But it would be politic not to say anything which may appear to indicate that the arrangement in the code is a *final* one; and I would put the word "ordinarily" between the words "not" and "be" in the second sentence of sub-paragraph (1) of paragraph 39.

P. Rajagopala Achariyar—4-7-15.

Further Office Note.

As the Director's proposals for the establishment of a normal training school have not yet been approved and are not to be approved for the present, the whole of this chapter may be removed from the Code.

C.R.—11-10-15.

C. G. Todhunter—30-10-15.

Office Note.

100. The remaining portion of Vol. I of the Code deals with appendices prescribing forms. These will require slight alterations with reference to the orders that may be passed on the several proposals made above. With reference to alterations in the draft Code the modifications in the appendices may be carried out afterwards.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

P.R.—4-7-15.

VOLUME II

Office Note.

101. The second volume of the code contains detailed syllabus for each subject in the various courses—'Practice,' 'Workshop' and 'Theoretical.' These have been drawn up by special sub-committees appointed for the purpose. The volume also contains an introductory chapter which explains the several courses for which syllabuses are drawn up. The matters dealt with in these are purely of a technical character and they have been dawn up by special committees. They may be approved.

P.R.—4-7-15.

Office Note.

102. It is submitted for consideration whether these notes may be sent u.o. of Mr. Tressler and he may be requested to note under each item whether he accepts the modifications proposed or not. A duplicate copy of these notes may also be sent to the Financial Department simultaneously for remarks on the financial part of the code laying down new schemes of grants, scholarships and rewards. These are dealt with in paragraphs 86, 95 and 96 of the notes above.

The references to Mr. Tressler on the code and also to the Director of Public Instruction had better be made demi-officially. Let me have drafts sharp. The office has taken a lot of trouble for which I am very thankful. The papers need not go to Financial just now.

P.R.—4-7-15.

164, Home (Edn.)—24

Draft demi-officials to Messrs. Duncan and Tressler are submitted for approval.

2. After their issue, the notes may be sent to Press for printing.

S.K.—6-7-15.

C.R.—8-7-15.

P. RAJAGOPALA ACHARIYAR—9-7-15.

Demi-official—from the Hon'ble Diwan Bahadur P. RAJAGOPALA ACHARIYAR Avargal, C.I.E., Secretary to Government, Educational Department.
To—K. T. B. TRESSLER, Esq., Acting Director of Industries.
Dated—Ootacamund, the 9th July 1915.
No.—744-2.

The following points have been noticed in the draft code regarding technical education submitted by you.

2. *Paragraphs* 35 *and* 36 *of Part I.*—The classification of industrial schools laid down does not take account of schools which may be established by local bodies. Would it not be better if schools under the management of the Government or local bodies are made to form one class, as in the case of ordinary schools under the Madras Educational Rules?

The classification "Government trade schools" does not appear to be exhaustive of *all* Government industrial schools. The Madura Technical School, the proposed Cocanada Mechanical Engineering School and the like cannot, I take it, be brought under this head, as they do not follow the apprenticeship system which is the special feature of the trade schools. Further, there may be trade schools under other than Government management; must not the classification be such as to include these also? Lastly, the necessity for opening a separate heading "Government Industrial schools leased to private bodies for working" is not apparent, as these schools are stated to be identical with private schools. Further, in paragraph 43 "leased and private owned" schools are classed as one and no where else is the distinction maintained. Would not the following revised classification meet all your requirements?—

(1) Trade schools	Under the management of the Government or local bodies. Under private management.
(2) Industrial schools	Under the management of the Government or local bodies. Under private management.

3. *Paragraph* 38 *of Part I.*—To fit in with the modifications suggested in paragraphs 35 and 36 of Part I the word "inspector" in clause (*a*) of this paragraph may be changed into "management." The paragraph will then apply to schools managed by the Government as well as other bodies.

4. *Paragraph* 4 *of Part II.*—The present Grant-in-Aid Code provides for the payment of grants towards endowments. Is it not necessary to make similar provision in the draft code also. If so, may the following clause be added as sub-paragraph 2 (iv) of this paragraph :—

"The endowment of scholarships, laboratories, workshops, museums, and other industrial objects of educational value."

A separate chapter would then be necessary containing detailed rules relating to endowment grants similar to those found in chapter XI of the Grant-in-Aid Code.

5. *Paragraph* 40 *of Part II.*—The expression "public management" occurs here for the first time and it has not been defined anywhere. Apparently, schools under the management of the Government and local bodies are referred to. In the absence of a definition, would it not be better to substitute for the words "public or private management" the words "the management of the Government, local or private bodies"?

6. *Paragraph* 47 *of Part II.*—The minimum age for admission into the "Practice" section is fixed at 10. The full period of training in that section is two full-time years or four half-time years. In paragraph 48 the minimum age for admission to the "Workshop" is fixed at 14. This means that a pupil who joins the industrial school at the age of 10, if he is a full-timer, will have to wait for two years after completing his course in the "Practice" section. The rule, as it stands, will only be fit for half-timers; entering the "Practice" section at the age of 10, with a four years' half-time course, they will be eligible for admission to the "Workshop" section at the fourteenth year. Either the minimum age must be changed for full-timers, or the minimum for the "Workshop" section must be lowered, or the minimum for the "Practice" section must be raised to 12 years.

7. *Paragraph* 61 *of Part II.*—The paragraph lays down that "Drawing" must be taught by a *qualified* master. It is not stated anywhere under what test the master is to be qualified. Apparently a pass in the Government Technical Examination in Drawing is meant. If so, would it not be better to specify it?

8. *Paragraph* 63 *of Part II.*—The minimum number of pupils for recognition to the theoretical stage is fixed as 30. Under paragraph 14 of Part II the numerical limit for each teacher in a theoretical class is 20. It would thus appear that for theoretical classes there must at the start be two instructors and without that the class will not be recognized. This can hardly be the intention? Should it not be possible to recognize a class with even one teacher? If so, the minimum for recognition must be fixed at 20. For the same reason the minimum number of pupils altogether in a school, which is put down as 30, should be altered into 20 where the theoretical stage alone in a school in one subject is recognized.

9. *Paragraph* 66 *of Part II.*—Would not the first sub-paragraph of this paragraph more appropriately come under the head "Teaching grants" since it relates to the assessment of grant? It is laid down in this paragraph that pupils remaining in a particular stage in excess of the prescribed period would not count for grant. Under paragraph 45 of Part II the increase in the period of training in the "Practice" stage should receive the sanction of the Director, and where such sanction is refused the pupil will not be a "recognised" one. Thus pupils whose retention is sanctioned by the Director should be considered "recognised", and when recognized, they should naturally count for grant; if so, such cases should be provided for in this rule, and it would therefore be desirable to insert the words "or has been retained for such excess period with the approval of the Director" after the word "prescribed".

In the second sub-paragraph of this paragraph the significance of the word "thus" in the second line is not apparent and it appears to be desirable to make the point clear.

10. *Paragraph* 71 *of Part II.*—The definite significance of the third and fourth sentences of this paragraph is not clear. It is unlikely that the management will be able to forecast all their requirements so early as three months in advance of the year. Such a condition is not insisted on in the case of ordinary schools where applications are made at all times during the year and grants are disbursed as funds become available. If it is intended to base the departmental budget allotments on the applications received, the date, 15th January, is too late for the purpose. Would it not be considered a hardship to preclude industrial schools alone from applying for grants beyond the 15th January of a year?

Under each description of grants specific rules prescribing the manner and the date of submission of applications are laid down and the general rule in this paragraph does not seem to be necessary.

Further, it is not clear what is meant by "first application". If the revised rules in the present Grant-in-Aid Code in regard to building grants are adopted (vide paragraph 11 infra) a preliminary application is requisite for such grants, but no date is prescribed.

11. *Paragraphs* 77 *to* 82 *of Part II.*—In the matter of building grants it is proposed to adopt entirely the practice followed in the case of ordinary schools except in regard to the payment of grants for the acquisition of sites for erection of buildings, which is proposed to be omitted in the case of industrial schools. There seems to be no reason why this should be omitted. Would it not be desirable to include provision for this also? In the draft the rules in this regard in the *old* edition of the Grant-in-Aid Code have been followed. These rules were completely revised in 1912 and further alterations have also been made subsequently. The revised rules provide for grants for extensive alterations and repairs to buildings, for payment of advances, for increasing the period of mortgage of the property to the Government to forty years, etc. It would be desirable to adopt the revised rules which are embodied in the latest issue of the Grant-in-Aid Code with suitable verbal modifications where necessary. Have you any objection to do so?

12. *Paragraph* 12 *of Part III.*—It appears to be desirable to fix the period of the tenure of office of the members of the examination committee, say, at three years, as has been done in the case of the Secondary School-Leaving Certificate Examination Board and the European School Examination Board.

13. I am to request you to offer your remarks on the above criticisms.

CODE OF REGULATIONS REGARDING TECHNICAL EDUCATION.--

Draft---------re-amended by the Director.

DEPARTMENT OF INDUSTRIES.

CODE OF REGULATIONS

REGARDING

TECHNICAL EDUCATION.

PART I.

GENERAL SCHEME OF EDUCATION.

CHAPTER I.—DEFINITIONS.

TECHNICAL education is that particular type of "Special education" which has for its object the training of industrially efficient workers. Its value is accordingly to be judged, not by an academic, but purely by a practical industrial standard.

2. In some respects instruction of a technical character may be regarded as of sufficient general value to warrant its inclusion (in a partial form) in a general educational course. But inasmuch as the object of the teaching will not then be industrial, instruction thus provided cannot be regarded as technical and may be termed manual training. The object of the training being fundamentally different in the two cases, technical education and manual training must be treated as entirely different types of education which it is impossible to combine.

3. Industrial workers are broadly divisible into two classes:—

(1) Those who direct the work;

(2) Those who actually perform the work;

and technical education may be divided into two corresponding classes, the training of the first class of worker being termed *technological* and that of the second *industrial education*.

4. *Technological* education is intended to afford the higher training necessary for the technical and administrative control of industry, and is essentially theoretical in character

5. *Technological* education may be of two kinds, which may, for convenience, be termed "University" and "Polytechnic." Under the university system students begin their technical studies only after the completion of a good literary education which, with a technological education superadded, produces a type of man who, so far as training is concerned, is qualified for the highest position in industry. Under the polytechnic system the general educational qualification is lower and the type of man turned out is one who, in general, is qualified only for lower administrative positions. In both cases the instruction is essentially theoretical in character and does not in itself constitute a practical qualification: whether it proves to be so or not depends entirely on the man himself and the way in which he utilises his opportunities.

67. *Industrial* education on the other hand is essentially practical in character and any theoretical instruction given can be regarded as useful only in so far as it amplifies, explains or correlates the inferences drawn from practical experience. Divorced from practice or even carried to a point beyond the field with which a man is practically conversant, theoretical training is devoid of value. As a natural corollary it may be said that theoretical training must always succeed and never precede practical instruction.

78. *Technological* education therefore is intended to train two kinds of individuals: those qualified to occupy the highest administrative positions and those qualified to perform only lower administrative duties, it being however understood in both cases that the value of the individual, as an industrial unit, will depend on personal qualifications which the training given can only encourage but cannot actually impart.

89. *Industrial* education is also intended to train two kinds of individuals: the journeyman and the master craftsman, the relation between the two being comparable with that existing between the higher and lower classes of technologically trained men.

CHAPTER II.—TECHNOLOGICAL EDUCATION AND ~~TECHNOLOGICAL~~ INSTITUTIONS.

9. The only subjects in which technological instruction is now given in this presidency are dyeing and leather work. The course for the former is four terms and the fee Rs15 per term, and the course for the latter six terms and the fee Rs30 per term.

10. In addition, the Madras Government have sanctioned a number of scholarships for technological instruction in other subjects tenable at the Victoria Jubilee Technical Institute, Bombay.

11 ~~11~~. *Courses.*—The particulars of the technological courses so far arranged are as follows:—

CHARACTER AND DURATION OF TECHNOLOGICAL COURSES.

Name of the course.	Where provided.	Duration of course.	Fees per term
			Rs.
Textile Chemistry ...	V. T. I., Bombay ...	8 terms ...	30
Metal Work	Do.	2 „ ...	30
Leather Trades	Technical Institute, Madras.	6 „ ...	30
Textile manufacture ...	V. T. I., Bombay ...	8 „ ...	25
Electrical Engineering ...	Do.	8 „ ...	25
Mechanical Engineering.	Do.	8 „	25
Dyeing	Technical Institute, Madura.	4 „ ...	15

12 ~~15.~~ *Admission.*—Admission to all these ~~polytechnic~~ courses is by examination, oral and written, held ~~simultaneously in Madras, or if necessary also at Madura and Bezwada~~ in April of each year. The examination will be of a non-technical character, but will presuppose a general education about equivalent to the Matriculation standard. The examination is not competitive, being intended merely for the purpose of ascertaining whether applicants are fit for higher training or not.

13 ~~16.~~ The conditions for admission to the qualifying examination are as follows:—

(1) Candidates must adduce evidence of at least two years' apprentice training in the workshop of a recognized industrial school or in a commercial factory This practical qualification the Director has power to waive, but he will do so only in special circumstances and when he is fully satisfied that the candidates' practical training will be completed subsequently.

(2) Candidates must not be under 16, not in general, over 20 years of age.

(3) Candidates must produce a letter of recommendation either from the manager of the industrial school they have last attended, from their present employer or, if not practically trained at all, from the headmaster of the school in which they last studied.

(4) Candidates must furnish evidence that their general education is up to the required standard (Matriculation) and must also submit a certificate of physical fitness signed by a qualified medical officer.

(5) If a Candidate wishes to Complete his education in Bombay and is under age he must further produce a declaration signed by his parent or guardian sanctioning his prosecuting his studies in Bombay and testifying to his financial ability to complete a course of study there. If the candidate is of age he must himself sign a declaration of financial ability to study.

14 ~~17.~~ *Fees and Stipends.*—The fees for the various courses are given in paragraph ~~14.~~ 11. No stipends of any kind will be awarded for the present.

(old para 18)

15. Scholarships.- A certain number of scholarships (at present amounting to 6) will be awarded annually to deserving pupils desirous of proceeding to Bombay of a value of Rs.30 per mensem

Forms of application for admission to the qualifying examination (Appendix XX), for scholarships (Appendix XXV) as well as all further particulars regarding these courses may be obtained from the Director of Industries. Application for scholarships must be made not later than February 1st and application for admission to the examination not later than 1st March of every year.

16 ~~20.~~ *Attendance and dismissal.*—All students must be regular in attendance. Students requiring leave must apply to the Principal of the institution and must not avail themselves thereof without his previous sanction. Continued irregularity or absence without leave will be regarded as a breach of rules and is liable to lead to dismissal.

17 ~~21.~~ *Examinations.*—At the end of the prescribed course of technical training an examination will be held, on the result of which technological certificates will be assigned, but not awarded unless or until the candidate has completed a further prescribed course of practical training or satisfied the examiners regarding his practical capacity.

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CHAPTER III

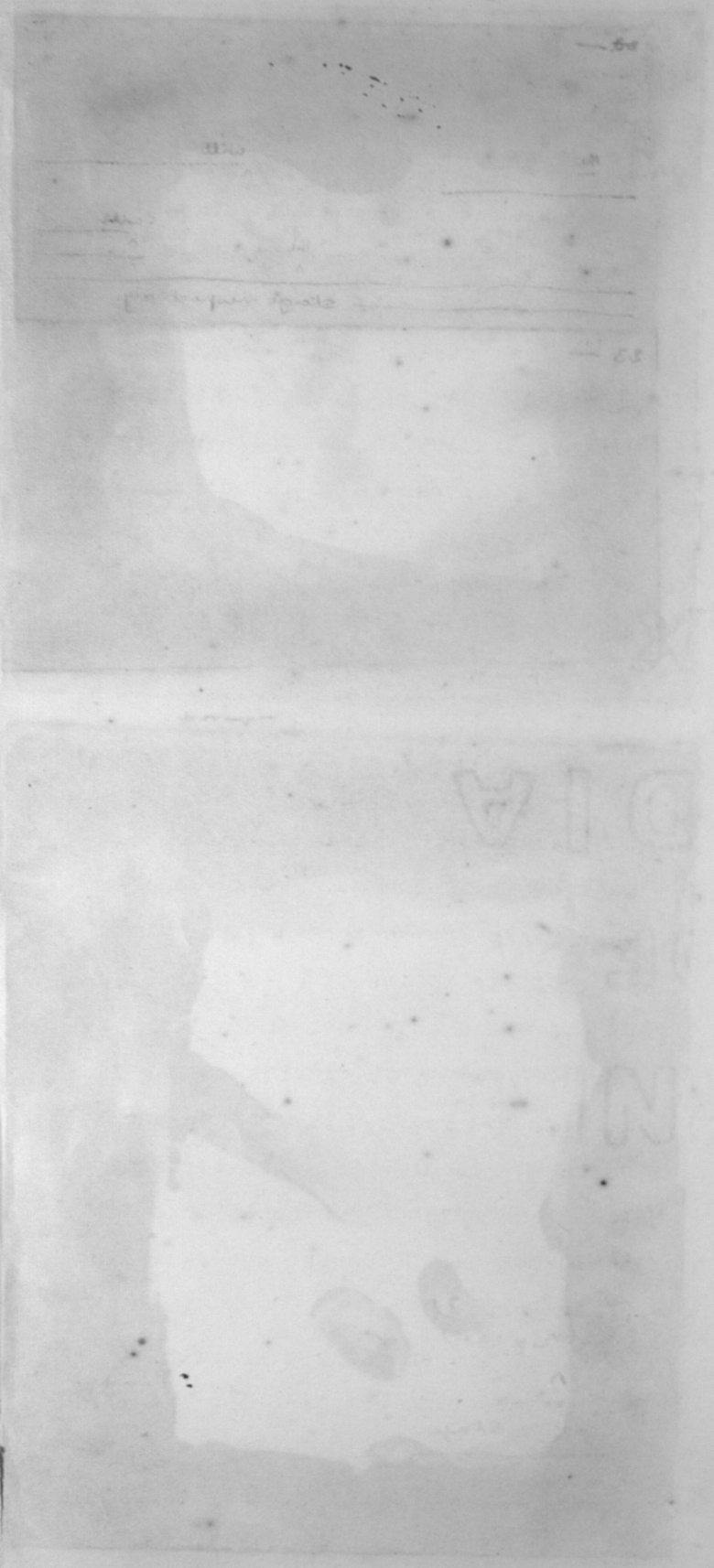
INDUSTRIAL EDUCATION.

18~~19~~. Industrial Education is of two types, one suited for the training of what may be termed a journeyman, that is, a man who has merely learnt a trade, the other suited to produce a craftsman, that is, a journeymen with some theoretical knowledge of first principles added to his practical skill.

19~~20~~. Whilst it is eminently desirable that pupils should have attained the minimum standard of general education ~~required~~ before attempting to learn a trade it is at present generally impracticable to insist on this ~~point~~ and any system of industrial education must therefore make provision not only for practical and theoretical training but for general education also.

20~~21~~. *General Education.*—General Education may be divided into two parts: the first covering the amount of education required by a journeyman, the second covering the extra amount of education required in connection with the craftsman's course. ~~It has been decided that~~ The minimum standard of general education for the former ~~shall be fixed as~~ (approximately) that of the fourth standard and ~~the minimum~~ for the latter ~~as~~ that of the fourth form.

21~~22~~. (See para 15) Before a student can enter upon the workshop stage of the journeyman's course he must produce a certificate from the headmaster of a recognised school to the effect that he has received an elementary education up to the fourth standard and before he can be admitted to the Craftsman's course he must produce a certificate to the effect that he has received instruction in English, Mathematics, Science and Drawing approximately equal to that ~~of~~ given in the fourth Form of a Secondary School.



22 ~~23. 25.~~ *Practical Technical Education.*—The qualifications demanded of all practical industrial workers are of two kinds:—

(1) Skill;
(2) Ability to apply skill commercially;

and ~~the~~ course of practical instruction ~~may, like the course of general education~~ will be divided into two parts, the first having for its object the development of skill, the second the practical application of the skill acquired. These two parts, ~~which may~~ will be termed the "practice" and ~~the~~ "workshop" ~~sections are perfectly distinct in aim and character and are controlled by the Director of Industries.~~ stage respectively.

23 ~~24~~. (New para 16) Instruction in ~~a~~ the practice stage is provided only in industrial schools. Training in the workshop stage may be acquired either in an industrial school recognised up to this stage or preferably as an apprentice in a regular factory.

(New para 17)

24. The full period of training in ~~be~~ the practice stage is two years, that in the workshop stage 2 to 3 years if the (workshop) training is in continuation of the practice stage and 3 to 4 years if the workshop training is complete in itself (as in the case of apprenticeship in a factory). The period for the Craftsman's course is usually two years. The course should be taken concurrently with workshop training provided the conditions for admission to the course are satisfied (Vide para. 21.)

(New para 18)

25. At the end of the Practice stage an examination entitled the ~~Industrial School Leaving~~ Practice stage Certificate examination will be held at every industrial school by the school authorities and no pupil will be allowed to proceed to the workshop stage until he has

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passed this test in addition to producing the certificate of general education required by rule 21

(New para 19)

26. At the end of the workshop stage an examination entitled the journeyman's examination will be held at certain centres and will be conducted by Government.

(New para 20)

27. Apprentices do not qualify for admission ~~for~~ to the Practical stage ~~industrial school~~ examination ; but apprentices who wish to secure a craftsman's certificate (which is only awarded after the journeyman's certificate) will be permitted to sit for the journeyman's examination on producing (1) a certificate of general education of the kind required by rule 21 for admission to the craftsman's course and (2) a certificate from the manager of a factory in which they are working to the effect that they have completed the qualifying period of apprenticeship (Vide Part LLI para 29)

(New para 21)

28. A certificate entitled the Journeyman's Certificate will be given to all persons who pass the Journeyman's Examination.

(New para 22)

29. Theoretical Education Ordinarily the condition for admission to the throretical courses will bethe possession of the Journeyman's Certificate. If, however, the Inspector regards a candidate as fit for theoretical training he may permit him to begin such courses at any period in the workshop stage even before he has secured the Journeyman's Certificate.

Proof of such evidence will include generally evidence that the candidate is likely to complete the full workshop course evidence of the satisfactory general education as laid down in Rule 21 and in the case of pupils of an Industrial School proof of having passed the ~~Industrial School Leaving~~ Practical stage Examination.

The whole of the Craftsman's course is theoretical.

(New para 23)

30. At the close of the Craftsman's course a further examination will be held entitled the Craftsman's Examination. All persons passing this examination will qualify for a certificate entitled the Craftsman's Certificate which, however, will not be awarded unless or until the candidate has obtained a Journeyman's Certificate.

CHAPTER IV.—INDUSTRIAL INSTITUTIONS.

35. Industrial institutions providing regular or complete courses of industrial education are of three kinds—

~~(i) Government trade schools~~

~~(ii) Government trade schools.~~

(ii) ~~Government~~ Industrial schools ~~leased to private bodies for working~~. (Government or private)

~~(iii) Private industrial schools~~.

Besides which there are non-classified schools providing only special courses of instruction.

36. **Government Trade Schools.**—The system of training followed is the apprentice system.

37. REGULAR COURSES.—The only course of instruction ordinarily provided in a trade school in connection with the regular courses of industrial education is the course of theoretical training forming part of the craftsman's course. These theoretical courses are shown in Part III, para. 29.

38. *Admission.*—The conditions for admission are as follows :—

(*a*) Pupils from Industrial schools who wish to attend a course of theoretical training must apply to the Inspector and produce ~~an Industrial School~~ leaving certificate. The Inspector will then try to arrange for their apprenticeship for the time that they are undergoing instruction and if this is possible the pupils will be admitted.

(*b*) Candidates who have not studied in Industrial schools must produce a certificate from an employer stating that they are actually engaged in the trade in which they desire instruction.

(*c*) Candidates must not be under 16 years of age.

(*d*) Candidates must produce a letter of recommendation from the manager of the industrial school last attended, or from their present employers.

(*e*) Candidates must adduce evidence to show that they have attained at least the fourth form standard of general education. If even so, their literary attainments are found to be deficient they may be required to attend a course of general instruction up to that standard before admission to the theoretical course.

39. *Fees and Stipends.*—In the first instance no fees will be levied for the theoretical course. Except in the eventuality mentioned in Part III, para. 14, no stipends will be awarded by Government.

40. *Scholarships.*—Specially deserving candidates who would without financial assistance be unable to continue their practical training may, on the recommendation of their employers and at the discretion of the Director of Industries, be given scholarships of the value of Rs. 5 per mensem.

Forms of application for admission to trade schools (Appendix XXI) and for scholarships (Appendix XXV) may be obtained on application to the Inspector of Industrial Schools. Applications for scholarships must be received duly filled up before 1st April of each year and for admission to the school before 1st May.

The number of scholarships available will be notified about the middle of March in the *Fort St. George Gazette*. Scholarships will be awarded by the Inspector of Industrial Schools on the merits of the applicants.

41. *Examination.*—At the end of each course a written and oral examination will be held covering the ground defined in the syllabus. No (craftsman's) certificate will

however be awarded unless candidates also hold or obtain a journeyman's certificate.

42. Special Classes.—In addition to the regular courses of instruction popular lectures or special classes for artisans will also be provided as required (*vide* Part III).

43. **Industrial Schools** (~~*leased or private owned*~~).—The training in these schools will usually be on the 'Industrial school system,' but managers may with the previous sanction of the Director of Industries admit apprentices direct to the workshop section of certain branches.

The general rules applying to these schools are laid down in the next part.

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15. Annasundaram.
16. V. Srinivasan
17. Balavenkatasubramaniam.

PART II.

INDUSTRIAL EDUCATION.

CONDITIONS FOR STATE AID TO PRIVATE INSTITUTIONS.

CHAPTER I.—CHARACTER, OBJECTS AND GENERAL CONDITIONS OF AID.

1. *Grants-in-aid.*—A sum of money is annually set apart to be expended under these rules as grants-in-aid of industrial schools leased to or under private management with the object of extending and improving industrial education. Such grants will be given impartially and without reference to any religious instruction to all schools which impart sound instruction, subject to the conditions hereinafter specified and with due consideration for the requirements of each locality, and of each institution, and of the funds available.

2. *Reservation of discretion by Government.*—The Government reserve to themselves, anything in the rules of this Code notwithstanding, the right to refuse or to withdraw any grant at their entire discretion.

Grants will ordinarily be withdrawn from a Manager if he or any of the instructors employed by him takes part in political agitation directed against the authority of Government or inculcates opinions tending to excite feelings of political disloyalty or disaffection among the ~~people~~ pupils.

3. *Definitions and terms.*—The term "*Director*" signifies Director of Industries; the term "*Inspector*" signifies the Inspector of Industrial Schools; and the term "*Manager*" includes a board of managers.

4. *Objects for which aid may be given*—

(1) Grants are given for teaching.

(2) Grants are also given for—

(i) the erection, enlargement and purchase of school buildings and hostels or boarding houses for students attached to educational institutions (building grant);

(ii) the purchase of school and hostel furniture, apparatus, chemicals, and appliances; of books for school libraries; and of the plant, materials and tools required for laboratories and workshops (furniture grant);

(iii) ~~the cost of preparing work for exhibitions.~~

the term "Local Board" includes a Municipal Corporation or Council or a District or Taluk Board; the term "Local Funds" Municipal or District or Taluk Board Funds; the term 'President' includes the Chairman of a Municipal Corporation or Council

(regarded as superfluous)

(iv) the cost of needle work or other art and industrial exhibitions

(v) the endowment of professorships, lectureships, teacherships, scholarships, laboratories, workshops, museums and other educational objects

(Payment of Stipends to teachers under training)

5. Sanctioning authority .- Except in cases in which a reference to Government is required, all grants paid from Provincial Funds are sanctioned by the Director or the Inspector as the case may be, and all grants paid from Local Funds are sanctioned by the Local Board concerned, provided that the grants have been recommended by the Department of Industries.

6. *Interpretation of rules.*—The interpretation of any rule in this Code shall, in the first instance, rest with the Director; provided that no interpretation of a general nature shall be binding on a manager which has not been approved by Government and notified in the *Fort St. George Gazette*.

7 8. *Appeal to sanctioning authority.*—An appeal shall lie to the sanctioning authority for the revision of its orders.

8 ~~8~~. *Appendices to have effect of rules.*—The appendices to the Code shall have the same effect as the rules of the Code and shall be treated as part of the Code.

9 ~~8~~. ~~*Control.*~~ Management —Every institution on behalf of which aid is sought shall be under the ~~control~~ management of one or more persons recognized by the department, who, in the capacity of proprietors, ~~or~~ of trustees, or of members of a committee elected by the society or association by which the institution is maintained, shall undertake to be answerable for the maintenance of the institution and the fulfilment of all the conditions of recognition and aid including the due enforcement of such rules of discipline as are prescribed from time to time.

The ~~controlling authority~~ management may, with the approval of the department, appoint a person as correspondent to transact the current business of the institution with the department.

Application for change of ~~control~~ management of an institution should be made to the Director. To qualify for aid a school must be recognized.

10 8. *Declaration by the ~~controlling authority~~ management.*—Every application for recognition shall be made in the form shown in Appendix XIII, and shall contain a declaration, signed by the correspondent to the effect that the conditions of recognition and aid laid down in ~~this Grant-in-aid Code~~ the Technical Education Code are being and will continue to be fully observed, excepting any rules from which the institution may be specially exempted, and that the management is prepared to subject the institution, together with the current, endowment, and trust accounts; its establishment, time-table and registers, to inspection, and to furnish such returns as may be required by the department.

11 ~~10~~. *Reservation of right regarding the use of books.*—Government reserve to themselves the right to forbid or to prescribe the use of any book or books in aided schools.

Managers of schools shall, as a condition of receiving grants-in-aid from public funds, be required not to use, without the express sanction of the Director of Industries any text-book which is not included in the authorised list of text-books, which may from time to time be issued by him.

(inclusion unnecessary)

New para 67 - Income to be devoted to Educational purposes —
No aided institution shall be allowed to spend any portion of its income for other than educational purposes.

12 ~~11~~. *Reservation of right regarding employment of instructor.*—It shall be competent to the Director of Industries to forbid the employment in aided schools of any instructor whose certificate has been withdrawn after due enquiry ~~and a fair hearing have shown~~ or come to the conclusion on him unfit to be an instructor.

13. Rules of discipline.- The rules of discipline in aided schools shall include the rules prescribed in Chapter VIII--A of the Madras Educational Rules for colleges under public management.

In the case of a professor or lecturer who violates rule 6 of the

the aid rules, it shall be the duty of the management or governing body of the school at which he is employed to check such abuse; and if the governing body fails to do so, action may be taken for the withdrawal of recognition or aid from the school.

CHAPTER II.—GENERAL RULES FOR INDUSTRIAL SCHOOLS.

14 ~~12~~. The recognition of industrial schools shall vest in the Director who shall, before according recognition, satisfy himself as to, besides the other matters specified in this chapter, the following:—

(*a*) The character of the teaching, the organization and development of the school.
(*b*) The educational needs of the locality.
(*c*) The financial stability of the school.
(*d*) The constitution of the managing body
(*e*) The scale of fees charged as compared with those charged in other institutions in the same locality.

15. *Site, ~~plan~~ and accommodation.*—No school shall be recognized which is held in a building or buildings of which the site, ~~plan~~ and accommodation have not been approved by the Director. When the accommodation is added to, the ~~plan~~ of the additional building must be submitted for the approval of the same authority.

The ~~plans~~ for all machinery or plant to be permanently erected shall similarly be submitted for approval.

16. The ~~plan~~ of a school building and of any additions to such building shall give full information regarding the superficial and cubic space of the building and of each room in it. It shall also show the exact positions of doors, windows, stairs, etc. The ~~plan~~ shall be certified correct by the person who has prepared it. The ~~plan~~ of an old building submitted for purposes of recognition shall also be accompanied by a certificate from the person who has prepared it to the effect that the building is in a state of good repair.

17. The ~~plan~~ may be prepared by any competent person. Managers who ~~require~~ the services of an officer of the Public Works Department ~~should~~ apply to the Executive Engineer of the ~~district, or, in the Presidency town, to the Consulting Architect~~ [*Note A, page* 82].

18. *Dimensions of buildings.*—The dimensions of the buildings shall be such as to provide at least 8 square feet of area and 80 cubic feet of space for each pupil on the rolls. In calculating the dimensions of buildings under this rule, verandahs which are solidly constructed and on which class rooms open may be included.

19. If any school has a dormitory intended for the accommodation of ten or more pupils attached to it, the dimensions of such dormitory shall be such as to provide at least 30 superficial feet and 400 cubic feet for each pupil. In the case of dormitories intended for less than ten pupils a proportionate increase in superficial and cubic space for every inmate less than ten up to at least 80 superficial feet and 900 cubic feet for a single pupil shall be provided.

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20. *Sanitary Inspection.*—Every school building shall be maintained in substantial repair and in a cleanly condition. It shall be subject to inspection by the departmental inspecting officer, and such officers of the Medical, Sanitary and Engineering Departments as Government may direct.

21. The following sanitary certificates shall be produced before recognition is accorded and on any subsequent occasion if called for: in the Presidency town a certificate signed by the Sanitary Commissioner, the Deputy Sanitary Commissioner, a District Surgeon, or the Health Officer of the Municipality: in the mufassal a certificate signed by the District Medical Officer or, if satisfactory reasons are given, by a subordinate Medical Officer. [*Note C, page* 83].

22. *Overcrowding of class-rooms.*—No class-room, laboratory, or workshop shall be permanently used as such by a larger number of pupils than the Inspector or Sanitary Officer has declared it sufficient to accommodate. The dimensions of each room shall be clearly indicated on the wall thereof.

23. *Latrine.*—Every school shall be provided with a suitable latrine.

24. *Protection from Small-pox.*—The presence of pupils unprotected from small-pox may be regarded as a sufficient cause for withdrawal of recognition.

25. *Furniture, Apparatus and Appliances.*—Every school shall be provided with the furniture, apparatus and appliances declared by the inspecting officer to be necessary for the standard of instruction up to which it teaches. and with the [illegible] apparatus prescribed in Appendix V.

(inclusion unnecessary)

26. For every payment of fees a pupil shall receive a receipt signed and dated by the manager or some one deputed by him. The receipt should show the class in which the pupil is reading.

3
(Navigation 15)

27. No pupil shall be newly admitted in any industrial school except on an application in the prescribed form signed by his parent or guardian or, if he is a major, by himself. All such letters of application shall be filed separately in the records of the school.

(considered unnecessary)

28. ~~27.~~ No pupil who has previously studied in any recognized industrial school shall be admitted to another industrial school, unless he presents a transfer certificate in the prescribed form (Appendix I) from that school. No pupil shall be allowed to attend school pending formal admission or enrolment, and no pupil shall be admitted or enrolled pending the production of an industrial school transfer certificate if due. If the pupil is alleged not to have attended any industrial school previously, an ordinary school transfer certificate may be accepted: if he is alleged not to have attended any school at all, the manager of the industrial school must prepare a declaration stating that, to the best of his knowledge, the pupil has received no previous education of any kind. All transfer certificates and declarations shall be endorsed with the admission number under which the pupil is enrolled. They shall be separately filed and shall be shown to the inspecting officer when required.

~~28~~. No pupil who has not attended a school in the first term shall be admitted in the second term unless the head of the Institution is satisfied among other things that the non-attendance of the pupil in the first term was due to unavoidable circumstances. Such admissions shall be scrutinised by the Inspecting Officer at his inspection of the school.

(considered unnecessary)

30 ~~28~~. If a pupil is permitted to enter the workshop direct, without previous industrial training, the sanctioning order (Chapter III, para. 49) must be filed with the pupils' transfer certificate. Application for a transfer certificate shall be made in writing by the parent or guardian of the pupil or by the pupil himself if he has attained his majority.

In the event of the manager's refusing or delaying to give a transfer certificate, the parent or guardian of the pupil or the pupil, if of age shall have the right of appeal to the Inspector whose decision shall be final unless he thinks it necessary to refer the matter to the Director.

(regarded as superfluous)

31 ~~29~~. The manager of the school into which a pupil seeks admission shall not apply for a certificate to the manager of the school which such pupil is leaving, but shall leave it to the parent or guardian of the pupil to apply for such certificate.

32 ~~30~~. The manager of the school into which a pupil is admitted shall place him in the class for which he is found fit, subject to revision by the inspector.

33 ~~31~~. Before granting a transfer certificate the manager is entitled to claim the term fee for one term only and that the term in which the last attendance of the pupil is registered.

34 ~~32~~. If a pupil is found to have obtained admission by means of a false certificate or false representations of any kind, he shall be summarily dismissed with forfeiture of whatever fees he may have paid.

35 ~~33~~. In the event of a pupil being formally expelled on account of grave misconduct, the manager shall record his reasons for the dismissal or expulsion and report the fact at once to the inspector. A pupil thus dismissed or expelled from one school shall not be admitted into any recognized school within a period to be determined by the Director on the inspector's recommendation.

76
under rules 34 and 35

36 ~~34~~. When a pupil is dismissed or expelled the manager shall not grant a transfer certificate until the expiration of the period for which the Director has debarred the pupil from admission into a recognized school. After that period has expired the transfer certificate shall be granted subject to the above rules; but in such cases the ~~headmaster~~ shall endorse it with the words "dismissed for false representation," or "expelled for misconduct," as the case may be.

37 ~~35~~. The rules of discipline shall include the following :—

(*a*) Every pupil shall in the workshop and the class-room wear a neat and suitable dress, and in all cases where good manners require it, a suitable covering for the head.

(*b*) No pupil shall be allowed to sit in a class-room with his shoes on, unless they are shoes of an English pattern and unless socks and trousers are worn also. But in plague-infected areas shoes of an English pattern together with socks may be worn in class even if trousers are not worn.

(*c*) Every pupil shall salute the instructors on the occasion of his first meeting them for the day within the school precincts.

(*d*) On the instructor's entering a class-room the pupils shall rise and remain standing till they are desired to sit or till the instructor takes his seat.

(*e*) No pupil shall be allowed to leave the workshop or class-room without the permission of his instructor, or until work has been stopped.

Registers and returns.

38 ~~36~~. Every school shall keep books in the prescribed form and submit to the inspecting officer, when required, the following :—

(1) A register of admissions and withdrawals (Appendices II and III).

(2) Attendance registers for pupils (Appendix IV).

(3) A term fee register (Appendix V) (if fees are charged).

(4) A time-table.

(5) A register of attendance for staff (Appendix VI).

(6) An acquittance roll (Appendix VII).

(7) A log-book, being a record of all events of importance connected with the school.

(8) A register of scholarships (Appendix VIII).

(9) ~~(8)~~ A library Register

(10) A cash book showing all receipts and expenditure

inclusion unnecessary

(11) ~~A~~ Register of Furniture, books and appliances purchased with the aid of grants from Public Funds (Appendix....)

39 *Attendance Registers.*—Separate registers shall be maintained in each subject as follows :—

(*a*) For pupils in the practice section. In this register "half" and "whole timers" * must be separated. Recognized † and non-recognized pupils must also be differentiated.

(*b*) For recognized apprentices in the workshop section.

(*c*) For recognized apprentices attending the theoretical courses.

(*d*) For paid workmen in the workshop.

Returns.—Accounts for the workshop section must be kept entirely separate from those for the rest of the school. For the school as a whole the following returns are required :—

(1) Schedule of stipends (Appendix IX).

(2) Schedule of staff qualifications and pay (Appendices X (*a*) and X (*b*).

(3) Financial statement (Appendix XI).

(4) Statistical return (Appendix XII).

and any other returns as may, from time to time prescribed.

In the workshop section complete working accounts are to be maintained on any commercial system approved by the Director.

All returns must be submitted not later than April 15th.

(Newspaper 27)

40. In order to allow of the gradual development of a school, recognition may be granted to any stage in one or more subjects at a time subject to the above-mentioned conditions and to the other rules contained in this Chapter and in Chapter IV.

A recognised school shall not, without the previous sanction of the Director, teach a subject or subjects or any stage in a subject which has not been recognised. When new subjects are introduced with proper sanction a formal application for recognition shall be made within six months from the date of introducing them and if recognition is not accorded the teaching of such subjects shall be put a stop to at the end of the term in which the refusal of recognition is communicated. The rules relating to admission and withdrawals discipline and registers shall be observed with respect to such probationary classes.

The Subjects taught in it

41. When a school or any of ~~its classes~~ has ceased to fulfil the conditions of recognition, or when the educational needs of the locality no longer require its existence, the Director shall withdraw the privilege of recognition from that school or class.

any of the subjects taught in it

~~39~~. A school or ~~class~~, from which the privilege of recognition has been withdrawn, owing to its having ceased to fulfil the conditions, shall not be restored to that privilege, until it has been certified by the inspector that the defects which led to the withdrawal of recognition have been remedied, and that in all other respects the school or ~~class~~ fulfils the prescribed conditions.

41 ~~38~~. If a recognized school ceases to exist or is transferred to a different locality or different managing body its recognition lapses and for the purpose of future recognition it shall be treated as a new school.

43 ~~40~~. Courses of instruction may be prescribed from time to time for all recognized industrial schools, ~~whether under public or private management~~.

CHAPTER III.—~~GENERAL RULES REGARDING~~ ORGANIZATION, MANAGEMENT AND STAFF.

44 ~~41~~. The organization of the school shall be as follows:—

The institution shall be in charge of a manager who shall be an individual of sufficient general education and administrative experience to qualify for such a post.

The management of the workshop shall be in the hands of a superintendent who shall be an individual qualified by practical industrial experience of modern manufacturing methods and a thorough practical knowledge of his trade or craft.

An adequate clerical staff is also to be maintained as prescribed by the Inspector.

Instructors shall be provided in the proportion laid down in Chapter II, paras. 13 and 14 and must hold instructor's certificates of the required grade.

45 ~~42~~. When a superintendent possesses the dual qualifications necessary for manager and superintendent, he shall be competent to exercise both functions, and even when the two appointments are separated, the superintendent shall have unhampered control of the practical side of the work.

(New para 33)

46. The instructors shall hold certificates as prescribed in Rule 64

(New para 34)

47. Without the sanction of the Director the strength of a class shall not continuously exceed 30, or 20 if it is a class for theoretical instruction.

There should be an instructor for every class. Each instructor of a class in the practice or workshop stage should be assisted by a foreman.

Time (Practical course).

~~48~~ ~~41.~~ *Industrial School System.*—In the practice section a minimum of 16 hours a week must be devoted to practical industrial work (including drawing). A pupil devoting this minimum time to industrial work will be termed a "half timer." Pupils devoting a minimum of 32 hours weekly to industrial work will be termed "full timers." To the practice section both half and full timers may be admitted; in the workshop section full time is compulsory but will include such time as may be devoted to "recognized" theoretical instruction.

~~49~~ ~~42.~~ The full period of training in the practice ~~section~~ stage is 2 full time years. The period may however, at option, be lengthened to 4 half time years or the equivalent. The full period of training in the workshop ~~section~~ stage is given in Part III—usually 3 years. Any proposed increase or decrease in the specified period of training in the case of any pupil or apprentice must receive the sanction of the Director of Industries. If such sanction is refused the pupil or apprentice may be retained at option as a paid workman in the workshop, but ~~he is not then "recognized"~~ and his name may not be included in the official register of apprentices.

~~50~~ ~~43.~~ *Apprentice System.*—Where schools are permitted to admit apprentices direct into the workshop without previous school training, the period of training is that specified in Part III, Chapter III, in connection with the apprentice system. In this case apprentices must be full timers.

Conditions for Admission.

~~51~~ ~~44.~~ **Practical Courses**—*Industrial School System—Practice Section.*—The minimum age for admission to industrial schools is 10 years.

No educational qualification is prescribed for admission.

~~52~~ ~~45.~~ *Workshop Section.*—The minimum age for admission into the workshop section is 14 years.

The qualification ordinarily prescribed for admission into the workshop ~~section~~ stage is the ~~industrial school leaving~~ practice stage certificate.

~~53~~ ~~46.~~ *Apprentice System—Workshop Stage.*—Schools may ~~be permitted to~~ admit apprentices direct to the workshop stage ~~in certain subjects~~, but every such admission must be ~~individually~~ sanctioned by the Inspector.

In the application for sanction ~~(which must be made by the manager)~~ the reasons for omitting the practice stage must be fully explained and the previous industrial career of the applicant set forth. The sanctioning order, ~~if obtained~~, must be filed for reference with the school transfer certificates and declarations (Chapter II, para. ~~28~~). 30

~~54~~ ~~30.~~ All apprentices who prove unsatisfactory as such are to be removed from the official registers as soon as possible, though they may, at the option of the manager, be retained as paid workmen.

Every apprentice will be paid according to a schedule prepared by the manager. Payment may be on a time or work basis at option, but must be proportionate to outturn.

~~55~~ ~~31.~~ **Theoretical Courses.**—No apprentice may be admitted to the theoretical courses unless he ~~has obtained the craft qualification certificate (4th Form)~~ possesses a general education equivalent to that required for and holds an Indus-

a practice stage certificate. Candidates must not be under sixteen years of age and must produce a letter of

recommendation from the Manager of the industrial school last attended.

from their present employers.

~~trial School-leaving certificate~~. In the case of apprentices admitted direct into the workshop, the second qualification will not be required, but in all cases admission to these classes will be subject to the approval, in writing, of the Inspector and, in general, admission will be refused to all individuals who have not shown marked ability.

~~56~~ ~~52.~~ *Fees and Stipends.*—Schools should levy fees, if possible. If this is done, they must be levied on a uniform scale.

~~It is recognized that some form of stipend is usually necessary to induce pupils to attend an industrial school.~~ ~~Stipends~~ should ordinarily be confined to the practice ~~section~~. In the workshop ~~section~~ a pupil must be encouraged to earn his living and no assistance must be given to apprentices. Stipends may, however, in special cases, be given to apprentices attending theoretical courses.

When stipends are

Stipends, if given, must be given on uniform scales in each class, but deductions may be made for such part of the cost of a pupil's board and lodging as may be regarded as properly debitable to industrial education. If, for instance, this portion is estimated to be Rs. 2 per mensem and a pupil also ~~gets~~ earns 8 annas per mensem pocket money, his stipend is Rs. 2-8-0 and must be so shown. In this case, outside pupils attending the school must be paid Rs. 2-8-0 in cash.

when hostel accommodation is provided

A schedule of stipends in the form given in Appendix IX is to be submitted annually. ~~As laid down in para. 47 *ante* stipends paid to pupils not *bonâ fide* industrial must be omitted from the statement~~.

~~58~~. *Scholarships.*—The rules regarding scholarships are given in Part III, Chapter II.

~~57~~ ~~54~~. *Attendance and Dismissal.*—Pupils must be regular in attendance. Repeated lateness, idleness, absence from class, as well as absence without leave, renders pupils liable to dismissal.

~~58~~ ~~55~~. *Examinations.*—A promotion examination shall be held annually, on the strength of which promotions will be made. The examination results must be sent to the Inspector as soon as possible. If any extraordinary promotions are made these should be brought to the notice of the Inspector for approval

~~59~~ ~~56~~. *Certificates.*—The rules regarding certificate examinations are given in Part III, Chapter I.

60 ~~57~~. **Special Classes.**—Ordinarily schools will only be permitted to provide the regular courses of industrial training, *i.e.*, up to the ~~Industrial School-leaving~~ Trades Certificate, journeyman or craftsman standard. In particularly well equipped and managed schools permission may be accorded for the introduction of ~~the~~ special classes ~~detailed in Part III, Chapter IV.~~

CHAPTER IV.—CONDITIONS FOR RECOGNITION.

~~61~~ 58. In order to qualify for aid, schools must be recognized. Application for recognition must be made on the form shown in Appendix XIII.

Recognition involves approval of manager and Superintendent, Instructing staff, courses of instruction and number of pupils.

62. (New para 48) The lower stage must always be recognised first before recognition is extended to the higher. Thus there canbe no recognition in the workshop stage till the practice stage has been recognised or in the theoretical classes till the workshop stage has been recognised.

63. (New para 49) Recognition of managers and Superintendents.- Recognition of managers and superintendents is at the discretion of the Director and is good only in respect of the institutions and subjectsin respect of which recognition has been given. Every application for such recognition must be accompanied by a full statement of the applicant's qualifications and training. Whenever a substantial change in the course of teaching is made or a manager or a superintendent is transferred to another instituion a fresh application for recognition must be made.

~~64~~ 61. *Instructors.*—All instructors will be required to possess instructor's certificates. The certificate required for charge of the practice section is the III * class or higher: for charge of the workshop section, II class or higher. To teach a subject in the theoretical stage an instructor must hold a I class certificate. In certain subjects the Director may give permission for a III class instructor to have charge of the workshop section.

Instructors must hold a certificate for the subjects which they supervise. Drawing must be taught by a qualified drawing master.

During the transition period the Director will award ad interim certificates at his discretion, but these will be liable ~~for~~ to cancellation as soon as the Normal Training School is started and regular training courses and certificates introduced.

(New para 51)
65. Courses.- Only subjects in respect of which a school is recognised should be taught. Recognition will depend primarily on the qualifications of the manager, superintendent and instructors to teach the subject in question. A subject may be recognised as far as the practice, workshop or theoretical stage.

(New para 53)
66. Numbers.- A second condition is that there should be not less than a minimum number of recognised pupils. This is fixed at 30 for a school as a whole and 15 for any one stage of instruction.

67 ~~66.~~ *Special conditions for recognition in the ~~higher~~ stages.*— Recognition up to the workshop stage will be conditional on the maintenance of proper workshop accounts and on these accounts, if not actually showing a profit, at least bearing testimony to a business-like and commercial system of manufacture. If these conditions are not fulfilled, recognition in the workshop stage will be withdrawn though schools may, if they wish, continue to run their workshop on their own lines provided that none of the rules contained in this code ~~are~~ is infringed thereby.

68. A recognised pupil in any stage is one who has satisfied the condition for admission to that stage and has not continued in it except with the express permission of the Director for more than

the period of the course laid down . He must also satisfy the time conditions viz., 32 hours' practical work per week for full timers (including drawing) and 16 hours a week for half timers. The time spent by apprentices in theoretical classes may be ~~calculated~~ included in the time counted towards practical work provided that the Inspector approves of the apprentice's receiving theoretical instruction.

CHAPTER V.—GRANTS.

69 ~~67.~~ *Character and Object of Aid.*—The character of grants has already been stated in Chapter II.

70 ~~68.~~ *Admission to Aid.*—The Director shall determine what institutions shall be admitted to aid after taking into account the character, the efficiency and the financial condition of the institutions, the educational needs of the locality and the funds at his disposal.

71 ~~69.~~ *Withdrawal from Aid.*—The Director may, after giving due notice, withdraw aid from an institution, should the financial condition of the institution or the educational needs of the locality cease to warrant its continuance.

72 ~~70.~~ *Penalties.*—The Director may, on the report of the inspecting officer, after enquiry, withhold, reduce, or suspend the grant on account of falsification of the registers, or misrepresentation regarding fees, attendance or other matters or violation of any of the conditions of recognition or aid, or other proved fraud or irregularity.

73 ~~71.~~ *Application for Grants.*—Ordinarily teaching grants will be allotted by the Director after a scrutiny of the annual returns and without specific application by the management. All other grants must be applied for. A first application, stating generally the character and extent of the expenditure on behalf of which aid is sought, should be submitted not later than January 15 of each year. If the grant is to be sanctioned during the financial year beginning with the following April, final revised application must be made not later than April 15.

74 ~~72.~~ *Payment of Grants.*—(i) Grants for a year may, on or after 1st August of that year, be drawn on a bill prepared in the prescribed form (Appendices XVI–XVIII) and countersigned by the ~~Director~~ Inspector.

(ii) On receipt of the countersigned bill the manager shall endorse it and present it for payment at the nearest treasury. Bills received by the manager during March shall be cashed before the 15th of that month.

(iii) Any adjustment which, for any reason, it may be found necessary to carry out in a grant in consequence of the operation of rule 74 or other once paid may be made in the grant for the following year.

Teaching Grant.

75. Teaching grants will not ordinarily be given or continued to an instituion which had not for the previous official year an average daily attendance of 25 pupils

The Director may, however, relax this rule in special cases.

76. An instituion shall not, ordinarily, be eligible to receive the full yearly grant sanctioned for it unless it meets on 180 working days in each year.

77. A school week shall consist of 32 hours of practical instruction or, for half-timers, of 16 hours.

Time spent in drawing class up to a maximum of 3 hours a week may be counted as practical work.

Note.- School da d to working days a workshop is not a

78. Income from private sources.- The grant will be considered as supplementing the income guaranteed from endowments, subscriptions, donations and other private sources over and above any expenditure incurred by the management on scholarships or in defraying any difference between the fees calculated at standard rates and those actually collected.,

79. The teaching grant for each school will, for the present, be fixed by the Directorevery year on a consideration of the inspection report for the past year, and the budget for the ensuing

one, and the general utility of the school and the amount contributed from private sources, provided that no grant shall be given that amounts to more than half the net cost of the school after excluding the amount contributed by the management, without the express sanction of Government.

79. Amount of grant payable.- The amount of grant payable in any year will ordinarily be the amount allotted.

The amount may be increased if any additional subject or a higher stage in a subject has been introduced with the approval of the Department or on account of any other approved increase in expenditure.

The amount may be decreased should it be found to exceed the amount permissible in accordance with the principle laid down in rule 76; or should the expenditure be considered unreasonable; or on account of a deterioration in efficiency; or on account of failure to remedy defects in organisation, discipline, instruction and accommodation pointed out in writing after a previous inspection; or as the effect of the operation of rules 72 or 76; or on account of an insufficiency of funds.

CHAPTER VI--BUILDING GRANTS.

80. Ofjects of aid and sanctioning authority.-- Grants not exceeding Rs.1000 may be sanctioned by the Director for any of the following purposes;-

(1) Purchasing, erecting or enlarging school houses or buildings or students' hostels including residential quarters for the warden or other staff attached to the hostel.

(2) Executing extensive alterations and repairs to buildings which have been newly purchased for school purposes.

(3) Acquiring land for school or hostel purposes.

~~to the hoste~~] .

~~(2) Executing extensive alterations~~

Grants exceeding Rs. ~~2,500~~ 1,000 require the sanction of Government.

~~81~~ 81. CONDITIONS OF GRANT.—(i) In the case of new buildings, extensions or alterations, the Director must have been convinced of their necessity and have approved their character. In the absence of the special permission of the Director or the Government these must not have been commenced before the sanctioning of the grant.

In the case of purchases of land or buildings the Director must either have been consulted before the purchase was made or be convinced that land previously purchased is to be newly devoted to an educational purpose.

(ii) Rooms in school and hostel buildings for the construction of which a grant is sought must be of not less than the following dimensions :—

Dormitories must be large enough to allow, if for a single pupil, 80 superficial feet and 900 cubic feet, if for more than one pupil a proportionately diminishing space down to 30 superficial feet and 400 cubic feet per head for ten or more pupils. A space of at least 8 superficial feet and 80 cubic feet per head should be provided in every room used as a class room, dining room or for any other dwelling purposes other than sleeping.

~~82~~ 82. BUILDING GRANT PROCEDURE.—(i) Applications in the prescribed form (Appendix ~~M~~) shall be submitted through the Inspector, ~~except in the case of first-grade colleges~~, accompanied by such outline plans as will enable the Director to judge of the suitability of the proposal from an educational point of view. The Director shall inform the correspondent whether he is prepared to consider the question of a grant, making, if necessary, alterations of the plans a condition of his so doing.

(ii) If the Director's reply be favourable the correspondent shall then submit to him, in duplicate, detailed plans, specifications and estimates (which may include architect's and draughtsman's fees) prepared by a professional person. When a grant-in-aid has been promised in respect of any building, the management shall, prior to the commencement of work thereon, give fifteen days' notice in writing to the Executive Engineer in charge of the division wherein it is proposed to construct the building.

(iii) During the progress of the work, access thereto and every reasonable opportunity to inspect and examine materials and take measurements shall be afforded by the management to the officers of the Public Works Department.

NOTE.—Any correspondent contemplating building operations for which he desires a grant from Government should apply to the Inspector for—(1) a form of application for grant and (2) instructions for the preparation of plans and estimates.

~~53~~ ~~50~~. PAYMENT OF GRANTS.—(i) Before the grant is paid in full it shall be certified in the prescribed form (Appendix ~~N~~) by the Engineer or other responsible officer deputed to examine the building that the work has been completed in accordance with the approved plan and estimate, or that the building is worth the amount on which the grant is claimed. Such certificate shall be countersigned by the Director.

(ii) Before any grant is paid the owner (or, in cases in which the permission of the Director has been obtained, the management) of the property may be required to execute a mortgage of the property or a deed of acceptance in respect of the grant. Until further orders the forms of the various deeds shall be as shown in Appendices ~~O, P, Q~~ and ~~R~~.

(iii) Grants sanctioned for any of the purposes mentioned in rules ~~50~~ ~~48~~ (1) and (2) except the purchase of buildings shall be drawn on bills prepared in the form printed as Appendix ~~S~~.

Grants sanctioned for the purchase of buildings or for the purpose mentioned in rule ~~50~~ ~~48~~ (3) shall be drawn on bills prepared in the prescribed form printed as Appendix ~~SS~~.

(iv) Advances may be made from time to time out of the sanctioned grant provided that the Director is satisfied that the working is proceeding satisfactorily.

~~54~~ ~~51~~. AMOUNT OF GRANT.—(i) The grant promised shall not exceed in the case of buildings to be erected one-half of the total cost of the work shown in the management's estimates as approved by the Director and modified by the Public Works Department and in the case of buildings or lands acquired one-half of the Collector's estimate of the value of the same.

(ii) The amount of grant to be actually disbursed shall be regulated by the actual cost of the work as finally completed. The grant promised with reference to the approved plans and estimates will be the maximum that will be paid, but the amount to be disbursed shall in no case exceed one-half of the actual cost of the work as finally executed. Before making payment the Director will require the management to furnish vouchers or certificates showing the actual amount expended by them in completing the work.

~~55~~ ~~52~~. CLAIMS OF THE GOVERNMENT.—If a building, for the acquisition, construction, extension, alteration or repair of which a grant has been drawn, or if land, for the acquisition of which a grant has been drawn, has, prior to the expiration of forty years from the date of payment of the grant, been diverted to purposes other than educational purposes approved by the Government, the manager shall refund such portion of the grant as may be determined by Government. If the manager fail to make such refund, the Government may recover the amount by such means as they may think fit.

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CHAPTER VII--FURNITURE GRANTS.

86 ~~56.~~ APPLICATIONS FOR AID.—Applications for grants under this chapter, which shall be in the prescribed form (Appendix T), and which shall be submitted through the Inspector so as to reach the Director not later than 1st May, shall be accompanied by details showing the number, description, and price of each article which it is proposed to provide.

87 ~~84.~~ *Object and proportion of aid.*—(i) Grants not exceeding one-half of the total cost may be given for furniture, and for appliances, tools, machinery and workshop fittings; for books and non-Indian periodicals for school libraries; and for the cost of preparing work for exhibitions.

(ii) Grants shall not be given to meet the cost of seats or desks of a pattern which has not been approved by the department, or for books of the value of eight annas and under.

(iii) Grants shall not be given for articles regarding which the Director has not been consulted and for which aid has not been promised previously to purchase or manufacture.

88 ~~85.~~ *Payment of grant.*—The grant shall be paid only on submission, before the date specified in the order sanctioning the grant, of vouchers duly receipted. It shall be drawn on a bill prepared in the prescribed form (Appendix XVIII).

89 86. *Claims of the Government.*—If an institution which has received aid under this chapter, is closed within five years from the date on which a grant under this chapter is drawn, the Government shall be at liberty to purchase the articles, towards the supply of which the grant was given, at a valuation to be made by an officer to be deputed by the Government for the purpose.

90 ~~87~~. *Grants by whom sanctioned.*—Grants exceeding Rs. 1,000 are sanctioned by the Government; grants of Rs. 1,000 and under by the Director.

99. The rules in regard to the payment of these grants to industrial schools are the same as those in chapter IX of the Grant-in-aid Code. They are reproduced below

(Omission unnecessary)

CHAPTER XI.—GRANTS TOWARDS ENDOWMENTS.

100 ~~61~~. OBJECT AND PROPORTION OF AID.—Grants not exceeding one-half the amount given or devised may, with the sanction of the Government, be made for the endowment of professorships, lectureships, teacherships, scholarships, laboratories, workshops, museums and other educational objects.

101 ~~62~~. CONDITIONS OF AID.—The following are the conditions under which grants shall be given :—

(i) The endowment shall consist of Government securities to be invested in the names of trustees approved by the Government.

(ii) The endowment must not be created from moneys derived either directly or indirectly from ordinary funded or school income.

(iii) The trust-deed, which must be approved by the law officers of the Government, shall contain a provision that, in the event of the object for which the endowment was created ceasing to exist, or of the management ceasing to comply with any of the conditions of the trust, the fund shall be distributed as provided therein.

(iv) The trustees shall render yearly accounts to the Director in the prescribed form (Appendix V).

(v) The endowment of professorships, lectureships or teacherships shall provide for the current salaries of particular professors, lecturers, or teachers; and no salary towards the endowment of which a grant has been paid shall be included as admissible expenditure for the purpose of determining the amount of aid to be given to a school or college.

102 ~~63~~. PAYMENT OF GRANT.—The grant shall be drawn on a bill prepared in the prescribed form (Appendix W).

103 ~~64~~. LIMITS IN THE CASE OF GRANTS FOR PRIZES.—No grants shall be given towards any prize endowment of the value of under Rs. 1,000, nor shall the amount of grant given towards any prize endowment exceed Rs. 1,000.

PART III.

INDUSTRIAL EDUCATION.

Scholarships

EXAMINATIONS, ~~CERTIFICATES~~ AND COURSES.

CHAPTER I.—EXAMINATIONS AND CERTIFICATES.

(Regular Courses.)

1. In the regular courses of Industrial Education examinations are held as follows :—

The Practice Stage Examination

~~Examinations for Industrial School-leaving certificate~~ on the completion of the practice stage.

Examinations for journeyman's certificate on the completion of the workshop stage or practical course.

Examinations for craftsman's certificate on the completion of the workshop stage *plus* the theoretical course.

In addition there is a High Proficiency examination (*vide* paras. 9 and 31).

2. The ~~Industrial School-leaving~~ Practice stage certificate is a continuous record of a pupil's progress similar to the Secondary School-leaving certificate in the Department of Public Instruction. It must be posted regularly by the school authorities. The final examination will be held twice a year in April and October, by the school authorities in the school itself and the results of the examination will be communicated to the Inspector. On his next visit he will verify the results by a personal inspection or examination of the pupils and their papers and will, if satisfied, endorse the certificate. If he does not regard any pupil, though passed, as fit for a certificate he may put him back one or more terms.

A pupil will not be certified as having secured the ~~Industrial School Leaving~~ Practice stage Certificate unless he can produce a certificate from the headmaster of a recognised school to the effect that he has received an elementary education up to the fourth standard.

3. *The Journeyman's examination* for which apprentices will enter on completing the prescribed journeyman's period of training under the school system will be held twice a year in May and November and will be conducted by a Board of Examiners appointed by Government. The examination will be held in Madras and, if necessary, ~~also in Madura and Bezwada~~ at other stations to be notified. It will be of an entirely practical character, and will last about a week. There will be two kinds of passes ordinary and with distinction.

4. Under the apprenticeship system practical experience is acquired in a workshop and an apprentice obtains only his theoretical training in the school. Apprentices who have received their practical training in this manner may however present themselves for the journeyman's examination if they wish to do so, subject to the conditions laid down in the next paragraph.

5. *Application for admission* to the examinations described in the preceding section must be made to the Director of Industries not later than 15th March or 15th September in each year. Forms of application for this, and all other departmental examinations may be obtained from the Director of Industries (Appendix ~~XIX~~). The admission fee is Rs. 2-8-0. Applicants for admission to the journeyman's examination must submit a copy of ~~the~~ his Industrial School-leaving certificate and a certificate from the manager of the industrial school at which ~~they are~~ he has studying to the effect that ~~their have~~ his has finished the prescribed course of practical training.

Every

Apprentices trained in a workshop must, in lieu of the above certificates submit a declaration signed by their employer to the effect that ~~they have~~ undergone a period of apprenticeship at least equivalent to that prescribed in para. 29 for the craftsman's certificate. ~~They~~ must also submit a certificate of conduct from the principal of the school last attended. ~~and must adduce evidence of general education not lower than the fourth form.~~

6. *The craftsman's examination* for which journeymen will enter on the completion of their theoretical training, will be held twice annually in May and November, immediately after the journeyman's examination, and will be conducted by a Board of Examiners appointed by Government. The examination will be held in Madras and, if necessary, also ~~in Madura and Bezwada~~ and will be written and oral, but the examiners will not be precluded from applying practical tests if these are considered necessary. There will be two kinds of passes: ordinary and with distinction.

at other stations to be notified

7. *Application for admission* to this examination must be made as in para. 5. The admission fee is Rs. 5. With ~~this~~ application a candidate must submit a copy of ~~the craft qualification (fourth form) certificate and of~~ his journeyman's certificate if ~~they~~ already possess one. Only candidates who have been duly registered as pupils in a recognised industrial or trade school will be allowed to enter for this examination.

together with evidence of General education up to the IV Form.

8. The craftsman's certificate constitutes a dual qualification, theoretical and practical, and will not be awarded unless candidates satisfy the examiners in both branches. The two examinations may, however, other conditions being satisfied, be taken independently.

9. *High Proficiency* examinations, practical or theoretical, will, when necessary, be held simultaneously with the journeyman's and craftsman's examinations respectively. No candidate will be allowed to enter for these examinations less than one year after obtaining his journeyman or craftsman's certificate (*vide* para. 51).

10. *Application for admission* must be made as in para. 5. The admission fee is Rs. 5. With their application candidates must submit copies of their journeyman or craftsman's certificate, without which qualification they will not be allowed to appear for examination at all. If the candidates pass the examination, their journeyman or craftsman's certificate will be given a high proficiency endorsement but no separate certificate will be awarded.

11. No examinations will be held and no certificates (beyond certificates of attendance) awarded in connection with any classes or courses other than those above specified.

appointed by Government on the nomination of the

12. The public examinations will be ~~held~~ conducted by a body of examiners ~~nominated by an~~ Examination Committee ~~and approved by Government~~. The Examination Committee will consist of seven members, the Director of Industries being ex-officio Chairman and the Inspector of Industrial Schools ex-officio ~~Secretary and~~ Secretary. ~~Members, who should be representative~~ The remaining members will be appointed by Government and will hold office subject to the approval of Government for three years. Preference will be given to representative employers of

labour. The Director of Industries and Inspector of Industrial Schools will not

~~aminers but cannot~~ actually undertake examination work though they are empowered to attend examinations. There is nothing to prevent other members of the committee being ~~elected~~ elected as examiners.

13. The committee will nominate examiners to the number of at least two for each subject (or three if the number of candidates exceeds 50) and examiners will be appointed annually.

May be omitted.

CHAPTER II.—STIPENDS, SCHOLARSHIPS AND REWARDS.

14. *Stipends* are not ordinarily awarded by the State in connection with the regular courses of industrial education, though managers of industrial schools may allow stipends to pupils out of their own funds in accordance with the rules laid down in Part II, para. 53.

Similarly employers of labour who are desirous of sending their apprentices to a trade school but find it impossible to induce them to attend otherwise may, at their own expense, allow stipends to their apprentices, subject to the same conditions as above stated. The procedure is regarded as wrong in principle and will be discouraged as far as possible by the Director; in certain trades, however, it appears that the giving of stipends to apprentices to make them attend classes is a universal necessity. If this fact is agreed upon by the Director and the employers in that trade, a standard rate of stipend will be fixed and employers will be reimbursed by Government at the standard rate for all stipends paid to such apprentices as may be admitted to a Government trade school for training.

15. *Scholarships.*—With the exception of the special trade scholarships (Part I, para. 40) scholarships are awarded only to pupils of industrial schools and only in connection with the regular courses of training. No scholarships are awarded for special classes. Scholarships are reserved for pupils of promise whose pecuniary circumstances are certified by the head of the school to be such as to prevent them from prosecuting their studies without assistance. The claims of those sections of the community who are most in need of aid, will, other conditions being satisfied, be first considered.

The number of scholarships available will be notified in the *Fort St. George Gazette* about the middle of March. Forms of application (Appendix XXIII) and other particulars may be obtained from the Director of Industries.

16. **Lower Scholarships.**—Scholarships will be awarded in the practice stage of practical instruction in industrial schools. No scholarship will be awarded for the first year (half time) but for subsequent periods the rate is as follows :—

Awarded at end of first year (half time) tenable during second year (half time), Re. 1.
Awarded at end of second year (half time) tenable during third year (half time), Rs. 2.
Awarded at end of third year (half time) tenable during fourth year (half time), Rs. 3.

Full time pupils qualify for double this amount but no individual can draw scholarships for more than the equivalent of a four years' half-time course (two years' full time).

17. *Application for scholarships.*—The scholarships will be awarded on the results of the annual school examination and for this purpose a list of results shall be sent to the Inspector of Industrial Schools as soon as possible after the examination and not later than May 1, together with applications for scholarships prepared by the manager on the prescribed form (Appendix XXIII).

18. No pupil failing to secure 66 per cent. of marks or a first-class pass will be eligible for a scholarship. In calculating marks, the year's work is to be taken into account, two-thirds of the maximum total being allowed for examinations and one-third for the year's work.

19. *Award of scholarships.*—With the reservation mentioned in para. 15 scholarships will be awarded in order of merit and the award will be notified in the *Fort St. George Gazette* about the end of May.

20. *Payment of scholarships.*—Scholarships will be drawn monthly by the manager on behalf of scholarship holders. Bills must be prepared in the prescribed form (Appendix XXIV) and presented at the local treasury for encashment.

21. *General conditions.*—No pupil shall be allowed to hold at the same time more than one scholarship. If eligible for more than one, he shall elect which he will hold, and the scholarship thus set free will be awarded to the next most deserving student. For the purposes of this rule a Government stipend is ordinarily to be regarded as a scholarship, but in special cases the Director may permit a scholarship holder to draw a Government stipend also.

The candidate shall bind himself to prosecute his studies in the subject in which he has passed and for which he is to receive a scholarship in a recognized industrial school.

If a scholar ceases to attend a class the fact must immediately be reported and the scholarship will be stopped.

Any scholarship vacated in the course of the period for which it is tenable may be awarded for the remaining period to an eligible applicant in the same year of study as the holder of the scholarship vacated.

Where the order of merit cannot be clearly ascertained, the Director may at his discretion order a further competitive examination among those who are eligible for scholarships.

All scholarships tenable under the above rules are liable to forfeiture, for idleness, misconduct, irregularity in attendance or failure to make due progress or to secure annual promotion.

Scholarships are valid for one calendar year unless the contrary is expressed, and run from 1st June to 1st June.

22. **Higher Scholarships.**—In schools where the 'workshop' stage is not recognized pupils passing the Industrial School-leaving certificate examination and desirous of continuing their education in another school may, on the recommendation of the manager and at the discretion of the Director of Industries be allowed journeyman's scholarships of Rs. 3 per mensem.

Note. This sum will be increased to Rs. 5 if candidates are permitted by the Inspector to take up a theoretical course.

23. *Application for scholarships.*—The scholarships will be awarded on the results of the Industrial School-leaving examination. The procedure in application is as laid down in para. 17.

24. *Award of scholarships.*—Scholarships will be awarded as laid down in para. 19, but is subject to the Inspector's subsequent approval of the examination results. If the results are not approved, the scholarship will be stopped, but no recovery will be made of any money already disbursed.

25. *Payment of scholarships.*—When scholarships are held in an industrial school the amount will be drawn by the manager as laid down in para. 20. When scholarships are held at a Government trade school the amount will be disbursed to the scholarship holder at the end of every month by the Principal.

26. *General conditions.*—To these scholarships the same conditions apply as those above specified—the scholarships are however ordinarily tenable for three years or the full period of workshop apprenticeship, whichever is less. The enhanced value of the scholarship is however only payable during the period covered by the theoretical course.

Pupils studying in a school where the workshop stage is recognised, qualify for similar scholarships if they possess the craft qualification certificate and wish to continue their training in a Government trade school.

27. Scholarships of the value of Rs. 5 per mensem may also be awarded to promising apprentices in indigent circumstances who have not attended an industrial school and wish to undergo a course of training in a Government trade school (*vide* Part I, para. 40).

May be omitted if not approved.

28. *Rewards.*—All candidates passing the journeyman's examination with distinction will receive a reward of Rs. 10 and those passing the craftsman's examination with distinction Rs. 15. All candidates securing high proficiency certificates will also receive a reward of Rs. 15.

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CHAPTER III.—REGULAR COURSES.

(Complete course of training.)

29. The regular courses of training are ~~fully~~ set forth in the ~~appended~~ following table.

Drawing for a period of not more than 3 hours a week forms an integral part of the Course in the practice stage.

Schedule of Regular (complete) courses of Industrial Education.

Name of journeyman's course.	Practical course for journeyman's certificate.					Extra theoretical course for craftsman's certificate.				Name of craftsman's course.
	School system.				Apprentice system.	Minimum period of apprenticeship for certificate.		Theoretical course.		
	Practice stage—Name of class.	Duration.	Workshop stage—Name of class.	Duration.	Period of workshop training.	School system.	Apprentice system.	Duration.	Number of subjects. *	
1	2	3	4	5	6	7	8	9	10	11
		YRS.		YRS.	YRS.			YRS.		
Turner's and fitter's work.	Mechanical work.	2	Fitter's and turner's work.	3	4	5	4	2	4	Mechanic.
Blacksmith's work ...	Do.	2	Blacksmith's work.	3	4	5	4	2	4	Do.
Foundry work ...	Do.	2	Foundry work ...	3	4	5	4	2	4	Do.
Electric fitting ...	Do.	2	Electric fitting ...	3	4	5	4	2	3	Electrician.
Metal work	Do.	2	Metal work ...	2	3	4	3	1	2	Metal worker.
Plumbing	Do.	2	Plumbing ...	2	3	4	3	1	4	Plumber.
Carpentry	Wood work ...	2	Carpentry ...	3	4	5	4	2	3	Carpenter.
Joinery	Do. ...	2	Joinery	3	4	5	4	2	3	Do.
Cabinet making ...	Do. ...	2	Cabinet making ...	3	4	5	4	2	3	Do.
Compositor's work ...	Printer's work ...	2	Printer's composition.	3	4	5	4	2	1	Compositor.
Proof reading ...	Do. ...	2	Proof reading ...	2	4	5	4	2	2	Proof reader.
Press work	Do. ...	2	Press work ...	3	4	5	4	2	2	Press worker.
Bookbinding	Bookbinding work.	2	Bookbinding ...	3	4	5	4	2	1	Bookbinder.
Printer's warehouse work.	Do.	2	Printer's warehouse work.	3	4	5	4	2	1	Printing Warehouse man.
Boot making ...	Leather work ...	2	Boot making ...	2	3	4	3	...	1	Boot maker.
Harness making ...	Do ...	2	Harness making.	2	3	4	3	...	1	Saddler.
Dress making ...	Needle work ...	2	Dress making ...	2	3	4	3	2	2	Dress maker.
Embroidery	Do. ...	2	Embroidery ...	2	3	4	3	2	2	Embroiderer.
Pillow lace work ...	Pillow lace work.	2	Pillow lace work.	2	4	4	3	2	2	Lace maker.
Tailoring	Tailoring ...	2	Tailoring ...	3	4	5	4	1	1	Tailor.
Handloom weaving ...	Handloom weaving	2	Handloom weaving.	2	3	4	3	2	2	Hand-loom weaver.
Carpet weaving ...	Carpet weaving...	2	Carpet weaving ...	2	3	4	3	2	2	Carpet weaver.
Agriculture	Will be dealt with by Agricultural Department.									

* *Vide* Vol. II, page 3.

CHAPTER IV.—SPECIAL CLASSES.

30. Apart from the regular courses of Industrial Education specified in the last paragraph, special classes will also be arranged. These are of five kinds—

(1) Popular lectures.
(2) Trade instruction classes.
(3) Extension classes.
(4) High Proficiency classes.
(5) Theoretical classes.

31. In contrast to the regular courses of education which are made up of various elements and represent a composite and complete whole, special classes do not form an integral part of a course of training but are complete in themselves.

Popular Lectures—are lectures on practical or technical subjects treated in a popular manner and are open to any individual who chooses to attend them.

Trade Instruction Classes—are elementary practical classes in handicraft, open to any *bona fide* artisan who wishes to learn something about a trade.

Extension Classes—are practical classes of a more specialised character intended for and open only to individuals who are already practically engaged in the trade to which the teaching applies.

High Proficiency Classes—(which may be either theoretical or practical) are classes of an advanced character, admission to which is limited to individuals who already hold a Craftman's or Journeyman's Certificate.

Theoretical Classes—are classes in subjects which do not form part of a regular course of Industrial Education.

32. Industrial Schools recognised up to the Craftman's stage in any subject may, with the permission of the Director, introduce High Proficiency Classes in that subject, but no extra grant will be given on account of these classes. Trade Instruction and Extension Classes are absolutely prohibited in recognised Industrial Schools.

In general no financial assistance will be given by Government to individuals attending special classes. This rule may be waived by the Director in the case of Extension Classes if such assistance is found to be absolutely necessary.

The Director is empowered to assist in the maintenance of Extension Classes by public bodies or private individuals if he is satisfied that a useful public purpose is served thereby, but no general rules can be laid down on this point nor regarding the character of the courses of instruction in the first three classes since these must be determined entirely by circumstances.

33. *Popular Lectures*,—will be arranged as required.

34. *Trade Instruction Classes*,—In addition to the subjects specified in column 2 (practice stage) of the ~~statement~~ table in paragraph 29, Trade Instruction Classes are also provided in the following subjects :—

Oil Engine Driving.	Motor Car Driving.
Gas „ „	Rattan Work.
Steam „ „	Electric Wiring.

These classes are open to any *bona fide* artisan. No fee is charged for admission. There is no examination and no certificates (except certificates of attendance) will be awarded.

35. *Extension Classes*—are provided in the subjects specified in column 4 (workshop stage) of the ~~statement~~ table in paragraph 29.

These classes are open to any artisan engaged in the trade in which instruction is given. No fee is charged for admission. There is no examination and no certificates (except certificates of attendance) will be awarded. The classes may, however, be regarded as preparatory for the journeyman's examination.

36. *High Proficiency Classes*– are provided in the following subjects :—

Name of qualifying course.		Name of High Proficiency Classes.	Character.*	Duration (years).
Journeyman's.	Craftsman's.			
Fitting and turning.	... ...	Motor fitting ...	P.	...
Do.	Mechanics ...	Motor car work ..	T.	...
Cabinet making ..	.....	Cabinet-making ...	P.	...
Presswork	...	Presswork ...	P.	...
Proof reading ...	Proof reader	General Printing ...	T.	...
Pillow lace ...	.....	Lace-making ...	P.	...
Tailoring	Tailors	Tailoring ...	T.	...
Hand-loom weaving.	Hand-loom weaver...	Dyeing	T.	...

37. In addition to the theoretical instruction included in the regular course for the craftsman's certificate, theoretical classes are also provided in the following subjects :—

Power Loom weaving. | Brickwork. Masonry work.

* T—Theoretical. P—Practical.

38. Individuals trained in schools where High Proficiency courses are recognised may present themselves for examination in the High Proficiency standard not less than twelve months after obtaining their Journeyman's certificate (in the case of practical courses) or their Craftsman's certificate (in the case of theoretical courses). If they satisfy the examiners a 'high proficiency' endorsement will be made on the journeyman's certificate they already hold subject to the condition that they shall have been practically engaged in the trade in which they seek special certification for the whole period intervening between the date on which they passed the journeyman's examination and that on which they seek to be examined for high proficiency.

CHAPTER V.—NORMAL TRAINING.

39. Normal training will be provided by Government. Private institutions will not be permitted to undertake normal training.

Training schools will be of only one kind, being institutions in which Instructors are trained to superintend and direct work up to the journeyman stage. Such teachers are termed Second-class Instructors. A higher technical course is however provided to train teachers also for the teaching of theoretical subjects and teachers who pass this examination are termed First-class Instructors.

Each training school will have a trade or industrial school teaching up to the craftsman's standard attached to it and in both cases model workshop accommodation will be available. A technical library will also be provided.

40. The training schools will be under the general control of the Principal. There will be a permanent staff, but a large part of the teaching will be done by individuals who are actually engaged in the practice of the trades or profession in which they teach and who only attend the school for lecture purposes for a few hours a week.

41. *Courses.*—The course for Second-class Instructors shall be as follows :—

(1) Demonstration and instruction in model school.
(2) Blackboard sketching.
(3) Freehand and technical drawing and sketching.
(4) Practical work in factories.
(5) English.
(6) Science.
(7) Workshop method and discipline.

The courses for First-class Instructors includes the following additional features :—

(8) Teaching technical subjects.
(9) Elocution.
(10) Extra science.

42. *Period of training.*—The training will extend over a period of two years. At the end of the first year it shall be determined, on the results of examination, which of the candidates are fit for training as First-class Instructors. These candidates will be required to remain in the school for a further period of two years, making three in all.

43. *Qualifications for admission.*—Admission will ordinarily be limited to candidates who have passed the craft examination with distinction. Candidates who have passed the theoretical part of the examination with distinction but have not yet finished the qualifying period of apprenticeship may, on the recommendation of their employers, be admitted one year before the apprenticeship period is due to terminate.

Every candidate for admission shall submit an application in the form prescribed in Appendix XXII.

The minimum age for admission is seventeen and the maximum twenty-five; it shall however be in the power of the Director, in very special circumstances to admit a candidate whose age does not fall within the above limits.

Candidates must also produce a letter of recommendation signed either by the manager of the last industrial school attended or by their present employer. In the latter case a certificate of conduct from the manager of the school (industrial or general) last attended must also be furnished.

Before actual admission the candidate must also submit a certificate of physical fitness and health granted by a civil surgeon or other similarly qualified medical authority.

44. *Selection of candidates.*—The selection of candidates will lie with the Principal of The Training School, who should take every care to exclude those that appear to desire training merely for the sake of stipends and without any real intention of entering the teaching profession. Preference will be given to pupils who possess educational qualifications above the prescribed minimum for the Craftsman's certificate (4th Form) subject to the condition that their practical attainments are not below the average.

45. *Fees and stipends.*—No fees will for the present be charged. Stipends will be allowed at the rate of Rs. 12 per mensem for teachers undergoing training in the courses for Second class Instructors and Rs. 15 per mensem for those attending the First class Instructor's course.

The maximum number of stipendiaries permissible in a training school at any one time is 20, but the Director has powers to increase the number in special cases.

Subject to a limitation on total numbers under training, the Principal of the Training School has powers to admit non-stipendiary pupils.

The allotment of stipends rests with the Principal of the Training School, who will see that the various classes of the population are fairly represented.

46 *Probation.*—Every student shall be considered to be on probation, for 50 working days; and if it shall appear to the Principal of the Training School that any student is not likely to prove an efficient teacher, such student shall, with the sanction of the Director, be required to leave the institution. During probation a stipendiary student shall be entitled to draw the full amount of his stipend, and if rejected at the end of the period of probation, he shall not be required to refund the amount drawn, provided that his rejection was not due to moral delinquency.

47. *Attendance and Dismissal.*—(i) The Principal of the Training School may give a student casual leave amounting to not more than seven days at a time, exclusive of Sundays and other holidays, and to not more than fifteen days in the year. In cases of real necessity, he may also, subject to the approval of the Director, give additional leave, but it shall be leave without stipend. A student will forfeit one day's casual leave for every four times that he is marked late.

(ii) A student shall forfeit all stipend during any period, however short, of absence without leave, and may be dismissed if he is absent without leave for three whole consecutive working days, or for a period aggregating five whole days in any one term.

(iii) The Director of Industries may grant leave without loss of stipend, for a period not exceeding one month, to a student who is absent in consequence of severe sickness certified to by a competent medical authority, or, where this is not available, by the head of the institution. If the leave exceeds one month, no stipend shall be granted for the excess period.

(iv) A student may be dismissed by the controlling authority for continued idleness, irregularity in attendance or serious misconduct; and, if so dismissed, he may be declared unfit for employment as a teacher. If he is a stipendiary student, he shall also be required to refund the whole amount drawn by him from Government funds.

48. *Examinations.*—At the end of the two years' course for Second-class Instructors or the three years' course for First-class Instructors an examination shall be held at which all teachers under training must appear. On the results of this examination First and Second-class Instructors' certificates will be awarded.

49. *Agreement to be entered with by students.*—Every student shall, before any stipend is paid him, enter into an agreement, to be executed on stamped paper in the form prescribed in Appendix XXVII.

50. If, from any cause other than continued ill-health certified to by a recognised medical authority, a student fails to fulfil the conditions of the agreement he may be declared to be unfit, absolutely or for a specified period, for employment as a teacher. If a stipendiary student, he shall also be required to refund the whole amount drawn by him from Government funds on account of stipend or such part of it as the authority financially concerned considers equitable in the circumstances of the case. A non-stipendiary student who has not already paid fees shall be required to defray the cost of his training at the rate of Rs. 15 per term and to refund any sum spent on his account.

51. Teachers who hold a technical teacher's certificate under the old rules or possess any other teaching qualification may apply for recognition without undergoing a regular course of normal training. These teachers will be examined and if found competent will receive a Third-class Instructors' certificate.

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CODE OF REGULATIONS REGARDING TECHNICAL EDUCATION.-

Remarks on the draft-----(Re-amended by the Director)

AMENDED CODE OF REGULATIONS REGARDING TECHNICAL EDUCATION.

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From a perusal of the amended Code I observe the following alterations:-

Part I-- Chapter I

Para 2 has been omitted. This paragraph and paras 6, 8 and 9 were specially introduced in order to avoid ~~the~~ confusion arising from the loose use of terms, 'Manual training', 'technical education', 'University' and 'polytechnic training', 'journeyman' and 'craftsman' are all terms which are used in a popular sense and have no specific meaning. The consequence is that there arises a confusion of ideas owing to the fact that the words are used in different senses by different people. I accordingly consider it essential to define the meaning of these terms in this Code, and for this reason I regard the retention of para 2 as desirable.

Note:-
All references to paras in this, unless specially stated, refer to the paras of the Draft Code.

Para 4 has been omitted---accepted.

Para 5 (para 3 of the amended code) has been cut out---accepted.

Paras 6, 8 and 9 have been omitted and para 7 (para 4 of amended code) cut ~~out~~ down Vide remarks under para 2. Should be retained

Para 10 has been omitted---accepted.

CHAPTER II

Para 11 (para 5 of the amended Code) has been amended---accepted.

Para 12 is omitted---accepted.

Paras 13 and 14 (New paras 5 to 10) I observe that the arrangement has been changed, particulars regarding Leather Trades and Dyeing being given first and those regarding the subjects

taught in the Victoria Technical Institute, Bombay at the end. I consider that all the subjects in which a pupil can expect instruction together with the duration of course, fees, etc., should appear in one place as being more convenient for reference purposes. The retention of paras 13 and 14 is necessary but may be modified as follows:-

Para 13 "In addition the Madras Government have sanctioned a number of scholarships for technological instruction in other subjects tenable at the Victoria Jubilee Technical Institute, Bombay."

Para 14 Courses.- The particulars of the technological courses so far arranged are as follows:-

(Here follows table)

Para 15 has been omitted. This para was specially introduced on the advice of the Principal, Victoria Technical Institute, Bombay, who has found it necessary to hold an admission examination in order to eliminate undesirables. Men may be able to pass University examinations and yet be quite unsuitable for industry; and the admission examination is of such a character as to test not only the actual knowledge but the common sense and the ingenuity of the candidate. The para, in my opinion, should therefore be retained though references to Madura and Bezwada

may be omitted if desired. 105

Para 16 has been abbreviated and amended. I cannot agree with the modifications made . My first condition regarding practical training, which is made absolute except that the Director has powers to waive it, is, in the amended version, reduced to a condition of mere preference. I think this undesirable . If no ~~such~~ stringent condition is imposed candidates will not take the trouble to obtain workshop training, ~~and will not be~~ as they are not likely to be profited thereby; ~~because~~ although such training may be given preference ~~and~~ yet if no one possesses it, the lack of this training offers no disadvantage whatever to candidates.

~~My~~ Condition 2 has been accepted.

~~My~~ Condition 3 has been abbreviated.

~~My~~ Condition 4 has been modified by the substitution of the Secondary School Leaving Certificate for evidence of general education up to the Matriculation standard. The two things are not synonymous; because in European schools there are no Secondary School Leaving Certificates, and cases will arise when a man has obtained the necessary knowledge in the required subjects without actually attending school classes.

The condition of physical fitness has been omitted altogether. In my opinion, this is one of the most important conditions.

The fifth condition has been omitted, and probably reproduced elsewhere.

Apart from these modifications of the sense of paragraphs which I cannot approve of, it is not clear to me what advantage the change of arrangement offers. It offers a very obvious disadvantage in that it does not

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display the conditions nearly so effectively ~~with~~ as my arrangement which, in my opinion, therefore may stand.

Paras 17 to 19 have been omitted. Here again a change in arrangement is made with no obvious advantage except possibly that of brevity. If the Code is used for reference purposes there are certain points regarding which readers desire special information such as conditions of admission, fees and stipends, scholarships etc., All matter in regard to these points has therefore been arranged in the same order throughout the book and been collected under these heads. In the light of the changes in principle made by Government, paras 17 and 18 may be abbreviated as shown in the corrected proof, but I consider that they should continue to be retained as separate paragraphs.

Para 19 has been deleted--- accepted.

~~By~~ Para 20. The heading has been omitted. It is not understood why this has been done the more so since this is inconsistent with the rest of the corrections Sub-headings have been retained for similar paragraphs elsewhere. It seems to me that ~~as~~ not as regards these sub headings some definite principle must be followed. I have followed the principle of putting them in. If Government consider that they should be omitted they should all be omitted, not only some. The same remark applies to all headings in the ~~second~~ first part of the Code, and since the majority of them have been allowed to stand I consider that they ~~headings~~ should be allowed to stand ~~also~~. throughout

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The excision of the second and third sub paragraphs of my para 20 is accepted.

CHAPTER III

~~Para~~ Para 22 has been abbreviated--- accepted.

~~Para~~ Paras 23 and 24. The verbal emendations are accepted. The omission of the two sub paras of para 24 is accepted.

New para 14 — Accepted

~~Para~~ Para 25. The verbal emendations are accepted.

~~Para~~ Paras 26 to 34 have been omitted and new paras 16 to 23 substituted. It is considered that the explanation offered by me in the deleted paras is necessary in order to convey a clear idea of the object of the proposed training. I find that most schools suffer from ~~the lack~~ an absence of recognised objective and I consider it necessary therefore to make clear in the Code what are the principles underlying the scheme of industrial education. I have, however, no objection to the omission of the paras if Government consider ~~the~~ essential, ~~for~~ for the substitution of new paragraphs provided the latter convey the sense of the former. This condition they do not in every case fulfil

New para 16 should read "Instruction in ~~the~~ a practice stage is provided only in Industrial schools. Training in the workshop stage may be acquired either in an industrial school recognised up to this stage or preferably as an apprentice in a regular factory".

New para 17 The full period of training in the practice stage is two years, that in the workshop stage 2 to 3 years if the

(workshop) training is in continuation of the practice stage and 3 to 4 years if the workshop training is complete in itself (as in the case of apprenticeship in a factory). The period for the Craftsman's course is usually two years. The course should be taken concurrently with workshop training provided the conditions for admission to the course are satisfied (Vide para 21.)

New para 18 ---accepted. In the amended code the examination has been termed "Practice Stage Examination". It is considered that the name proposed is better.

New para 19 may run as follows:-

' At the end of the workshop stage an examination entitled 'the journeyman's examination' will be held at certain centres and will be conducted by Government.'

New para 20 may run as follows:-

" Apprentices do not qualify for admission to the ~~Industrial School Leaving~~ Practice Stage Examination but apprentices who wish to secure a craftsman's certificate (which is only awarded after the Journeyman's Certificate) will be permitted to sit for the Journeyman's Examination on producing (1) a certificate of general education of the kind required by rule 21 for admission to the Craftsman's course and (2) a certificate from the manager of a factory in which they are working to the effect that they have completed

the qualifying period of apprenticeship (Vide Part III para 29)

New para 21 --- accepted.

New para 22 may run as follows:-

" Theoretical Education.-Ordinarily the condition for admission to the theoretical courses will be the possession of the Journeyman's Certificate. If, however, the Inspector regards a candidate as fit for theoretical training he may permit him to begin such courses at any period in the workshop stage even before he has secured tha Journeyman's Certificate. Proof of such evidence will include generally evidence that the candidate is likely to complete the full workshop course , evidence of the satisfactory general education as laid down in Rule.21 and, in the case of pupils of an Industrial School proof of having passed the ~~Industrial School Leaving~~ Practical stage Examination.

The whole of the Craftsman's Course is theoretical.

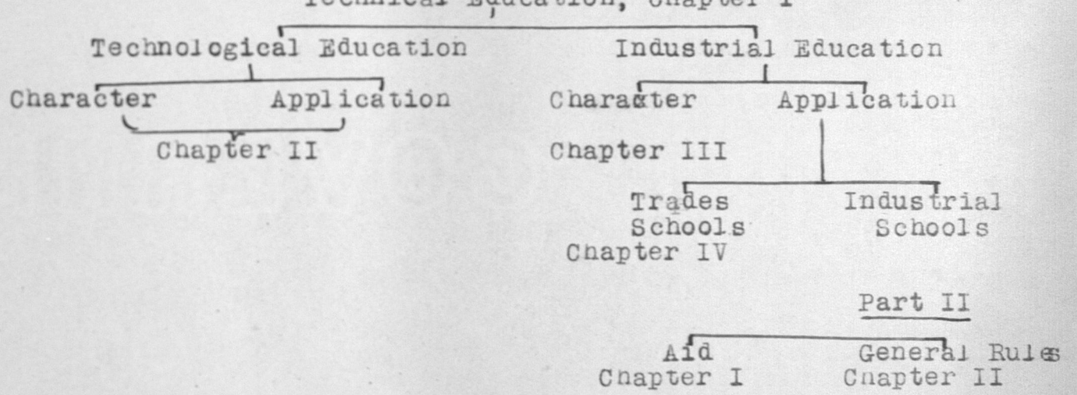
New para 23 may be amended as follows:-

"At rhe close of the Craftsman's Course a further examination will be held entitled the Craftsman's Examination. All persons passing this examination will qualify for a certificate entitled the Craftsman's Certificate which however will not be awarded unless or until the candidate has obtained a Journeyman's Certificate.

CHAPTER IV

This Chapter has beencompletely omitted and, from this point forward as far as Part III, the whole of my scheme has been so much changed about that it is impossible to offer any opinions comparative of the two Codes. If the logical sequence of my Code is to be preserved, Chapter IV must obviously be retained.

2. The following diagram shows exactly the principle on whichthe Code has been prepared and it seems to me that the only way of dealing systematically with the subject is the one I have adopted.



Leaving out Chapter IV simply leaves one quarter of the scheme to the imagination and I have the same objection to doing this as I have of accepting an absence of returns as being equivalent to a nil statement. The thing is unsystematic and the first point we haveto insist on in all industrial work is system. On principle I strongly object to my Code setting the bad example.

3. The same remark applies to Part II. I have arranged the Chapters in logical sequence.

4. It is reasonable to suppose that the first thing that school managers want to know is the character, object and general conditions of aid. These matters are accordingly dealt with in Chapter I. After that they may be expected to require information on general rules (Chapter II). After that information regarding details, that is, organisation and management. Finally, having understood the character of Government aid and made up their minds whether they wish to apply for recognition or not, they would be expected to look into the rules for recognition and the details regarding the character of the grants admissible, which latter form a suitable finish for the chapter.

5. A good deal of the information contained in Part II is taken from the General Education Code. But I cannot see why logical sequence should be interfered with in my Code, as has been done, merely because it is not observed in the literary Code. Nor can I agree with the principle adopted in the revision of my Code, that the literary Code should be slavishly imitated. My exprience of schools, now extending over 8 years, has shown me that certain conditions applying to literary schools are inapplicable to industrial schools and that other conditions require to be elaborated. I have made such alterations

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alterations as experience seemed to indicate. I am unable to see any necessary connection betweenthe two Codes: indeed in certain respects the conditions are antagonistic. Special clauses appear in the literary Code regarding gymnasia. I, for one, would strongly object to my industrial pupils wasting their energy in doing gymnastic exercises. Yet gymnastic classes have been inserted so as to make my Code parallel with the literary one. Again a Chapter on endowments appears in thelatter Code. This I particularly omitted because there are not any endowments for industrial schools, nor are there likely to be any. I have followed the principlethat the Code must be made as simple as possible and, although I have, in certain cases, added explanations on points which I found in practice to be imperfectly understood, I have tried to omit everything that I have found superfluous. It seems to me that to discuss the endowment of professorships, because such professorships are provided for in the Education Code, merely tends to confuse the readers of my Code without any compensating advantage.

6. The revised Code as it stands is an attempt to compromise between two antagonistic points of view. I try to deal with the Code from the practical standpoint and the revision ~~involves changes~~ is done on academic lines. ~~As for educational~~ Certain changes of principle suggested I can give effect to, ~~it~~, but I feel that it is quite useless to try and reconcile the

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structure of the two Codes as a whole. What I have accordingly done is to revise my own Code and I have made such changes in principle as have been suggested and I could accept, and explained my reasons in regard to those which are not accepted. This, I feel, is the best that I can do and I would suggest that if the structure of the Code as now revised is still not satisfactory it will be very much better to omit my Part II altogether and substitute whatever the revising officer may think desirable without reference to me.

Without discussing the changes in arrangement my remarks on Part II are as follows:- Chapter I

New para 55--not accepted as I am revising the Code on the old lines.

Para 1 (New para 56) The word 'industrial' has been omitted and 'other educational institutions' substituted for 'leased to or'. The object of the change is not evident. There seems to be no point in differentiating between "schools" and "other educational institutions"

Line 4--the word'and' added. It is better grammar to make short sentences.

Line 7--the word "industrial" added. accepted.

Line 8--the word "of" substituted for "for"--a question of grammar. I think "for" is more correct but would accept "of"

Para 2 (New para 57) the word "pupils" substituted for"people" --

misprint-- accepted.

Para 3 (new para 58)--addition of the words "the term 'Local Board' includes a Municipal Corporation or Council or a District or Taluk Board; the term 'Local Funds' includes Municipal or District or Taluk Board Funds; the term 'President' includes the Chairman of a Municipal Corporation or Council". As I never had any dealings with the bodies in question and think it very unlikely that they will ever be directly interested in industrial schools I regard the addition as superfluous.

Para 4 (New Para 59) --addition of sub para 2(1) viz., "the payment of stipends to teachers under training". This para had been particularly omitted by me because I do not think that industrial schools are competent to train teachers and accordingly I object to giving them any grant for that object.

The words "building grant" and "furniture grant" at the end of sub paras 2(1) and 2(2) respectively have been deleted. I consider that they should be allowed to stand, because they are the generic names for the grants described and are briefly referred to by these names Subsequently.

Deletion of the old sub para 2(3) accepted.

Addition of the new sub paras 2(4) and 2(5)---not accepted because there is no real necessity for subsidising work under sub para 2(4) which is really included under 2(3). The insertion of the

para in question merely invites applications for aid which may involve expenditure of a considerable number of small sums without concomitant advantage.

New sub para 2(5) not accepted because, so far, there has been no endowment nor are there ever likely to be any.

Insertion of the new para 60--accepted

Para 8 (New Para 64). The word "management" substituted for "control"--accepted.

Line 4-- addition of the word "or" accepted.

Deletion of the sentence "To qualify for aid a school must be recognised" in the last sub para--- not accepted; because I find in practice that school managers do not understand this point and the insertion of the sentence in question will save correspondence.

Para 9 (New Para 65) The substitution of "management" for "controlling authority" ---accepted.

The words "aid shall be made in such form as may, from time to time, be prescribed" substituted for "recognition shall be made in the form shown in Appendix XIII" It is not evident why the vaguer phrase should be substituted--not accepted.

Line 5 Substitution of "the Technical Education" for "this Grant-in-aid" misprint---accepted.

Para 10 (New Para 66) Addition of the sub para "Managers of schools, shall,

as a condition of receiving grants-in-aid.....issued by him"
This appears to be redundant but is accepted provisionally.

New para 67--Not understood. All the aided institutions do spend a considerable portion of their income for other than educational purposes, and it is not evident how the conditions stated can be enforced.

Para 11 (New Para 68) The substitution of "teachers" for "Instructors" The word instructor has been deliberately chosen because an instructor is a practical man who instructs pupils in the use of tools and not a teacher who teaches them.---not accepted.

Line 4. Substitution of "or who after due enquiry has been considered by" for and a fair hearing have shown"--accepted.

New para 69 Discipline has been dealt with in the old paragraph 35. New para accepted.

CHAPTER II

New para 1 . Not accepted for the same reasons as those given for new para 55.

Paras 13 and 14. Removed to Chapter III-- accepted.

Para 15 (New para). The recommendations are accepted.

Para 16 and 17 Substitution of the word "sketch" for plan--- accepted.

Para 17. Substitution of the word "desire" for "require", "shall" for "should" and "Division" for "district" and deletion of the last line--accepted.

The change of references in paras 17 and 21 (new paras 5 and 9) is not accepted. All appendices are forms whereas the notes are instructions and it appears to me therefore unsystematic to class the two together.

Para 25 (new para 13). Addition of the words "and with the gymnastic apparatus prescribed in Appendix..." .--- strongly disapproved of as industrial work furnishes sufficient gymnastic exercise.

New para 15. Accepted, but regarded as unnecessary

Para 27 (new para 16) Addition of the words "showing (a) the date of birth .....to a higher class". Not accepted as the whole of the information is given in appendix I.

Addition of the sub para "No pupil who has not..... inspection of the school"---regarded as unnecessary but accepted provisionally.

Para 28 (new para 17) Omission of the 1st sentence. This sentence is important as it provides for cases which will frequently arise in practice. Omission not accepted.

The addition of the words "or by the pupil himself if he has attained his majority"-- accepted.

Addition of the sub para "In the event of the manager's ..... refer the matter to the Director" Accepted, but regarded as superfluous

Para 30 (new para 19) Addition of the words "He shall prepare and .....

.....since the last inspection."
Not accepted because the Inspector can obtain the information from the School books and it is merely worrying the management unnecessarily to make them to submt statements of this kind

Para 33 (new para 22) Addition of the words "dismissed under rule 34 or being" --accepted.

Para 34 (new para 23) Addition of the words "under rules 34 and 35" Accept ed

Line 6. Substitution of the word "Manager" for "headmaster"---accepted.

Para 35 (new para 24). Substitution of the words "clean" and "respectable" for "neat" and "suitable", --not accepted. Itis absurd to expect a pupil in a work-shop to be clean. What he requires is a suitable dress-not a respectable one; suitable in the sensethat it has no loose ends hanging about which can catch machi-nery etc.

Para 36 (new para 25) Sub para 2-- Substitution of "Register of Attendance" for "Attendance Register". The change means a waste of two letters with no ob-vious advantage

Sub para 5. Substitution of the word "masters" for "staff" --not accepted as instructors are not masters.

Sub para 7. Log Book is not an import-ant thing and is dealt with by me in two lines . In the amendment 16 lines (سطر) are devoted to it. I object the amend-ment on principle as it attaches unneces-sary

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importance to the Log Book and distracts attention from other important matters.

Addition of sub paras 8 and 11(new)- accepted.

Addition of sub para 10. I particularly do not wish to insist on the maintenance of a cash book in industrial schools. Schools may keep a cash book for their own purposes, but I think it most undesirable for the Inspector to treat this as an official document. Grants are or should be made on ~~direct~~ estimated average expenditure and if the actual expenditure is gone into it simply means that school managers should constantly apply for an enhancement of grant. Moreover, the maintenance of a cash book in their official form apears to be beyond the capacity of most school managers and I see no reason whatever why they should be worried by the condition laid down which serves no useful purpose.

New para 26 Attendance Registers.-

Sub para (a) Omission of the sentence "In this register "half" and "whole timers" must be separated". Amendment not accepted as it is absolutely necessary for purposes of investigating grants to know which pupils are "half" or "whole timers"

Returns.- This para has been entirely omitted and the sentence "Every school shall submit punctually such returns as may from time to time be prescribed" substituted therefor.---not accepted. The return forms were prescribed after a careful consideration of the special features of industrial schools and with

reference to the forms already prescribed for schools for general education. All unnecessary information has been eliminated and the forms have been simplified so as to give the managers the least trouble in the matter. I consider it necessary to retain the paragraph, but have no objection to add the following at the end of the returns.

"and any other returns as may from time to time be prescribed".

New para 27 Accepted with modifications . The scheme in industrial schools is absolutely different from literary schools and recognition is not to be given for classes, but for subjects and stages and it is obvious that one cannot recognise, say, the second year of the school stage by itself ; but it must be given for the whole stage in certain subjects

Para 38 Treated as a sub para to para 37 (new para 28)--accepted.

Para 40 (new para 30) Omission of the words "whether under public or private management"---accepted.

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C H A P T E R III

Para 41 (new para 31). Omission of the last two sub paras---accepted.

Addition of new paras 33 and 34 -- accepted. Para 33 (para 46 in my revised draft may run as follows:-

"The instructors ~~shall~~ hold certificates as prescribed in Rule 64 (old para 61)

Omission of old para 43--accepted.

Para 44 (new para 35) The provision for half timers has been omitted altogether. It is at the option of the Government to refuse to recognise such pupils but all I can say is that if they are not recognised a very considerable portion of industrial school pupils will fall away at once and there will be a legimitate howl from most school managers. I object to have half-timers but under existing conditions I am unable to see how we can abolish them by a stroke of the pen. Paras 44 and 45 (new paras 35 and 36) must, in my opinion, stand

Para 45 (new para 36) Substitution of the word "stage" for "section"-- accepted.

Omission of the words "he is not then "recognised" and" in the penultimate line—approved.

Para 46 (new para 37) Omission of the last sentence---not accepted. It is necessary to make this point perfectly clear.

Para 47 (new para 38) Substitution of 'stage' for 'section'--accepted.

Change of minimum age from 10 to 12 years--not practicable if a half-time system is to be retained.

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Omission of the three sub paras.- Accepted under protest with the remark that the practice condemned is in vogue in industrial schools and unless something definite is ~~defined~~ laid down on the point it is likely to continue.

Para 48 (new para 39) Substitution of the word "stage" for "section"---accepted.

Substitution of "Practice Stage Certificate" for "Industrial School Leaving Certificate". Accepted under protest. This certificate being an exact parallel to the general School Leaving Certificate should, in my opinion, be given a similar name.

Omission of the last sub para:- Accepted under protest for the same reasons as above given.

Para 49 (new para 40) Omissions approved except the omission of the reference in the end.

Para 50 (new para 41) Addition of the words "as such"---accepted.

Para 51 (new para 42) Substitution of the word "possesses" for "has obtained" and "requisite general educational qualification" for "craft qualification certificate (4th Form)"---accepted.

Substitution of 'Practice Stage Certificate' for 'Industrial School Leaving Certificate'--(Vide para 48)

Line 4.- Addition of the sentence "Candidates must not be under .... from their present employers"--- Accepted with the exception of "or from

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their present employers""since an apprentice otherwise employed cannot be admitted in industrial schools.

Para 52 (new para 43) Changes accepted and omission of the last sentence accepted under protest.

Para 53 Revised. Revision not accepted as I find that school managers are extremely hazy about the nature, value etc of scholarships and they do not generally see the Fort St, George Gazette. In any case it seems to me that a general description of scholarships forms an integral part of the Code.

Para 54 (new para 44) Late attendance substituted for "lateness"--six extra letters--waste of energy--accepted under protest.

Omission of part of the 1st sub para and the whole of the second.- Accepted.

Para 56.-Omitted. I consider the retention necessary

Para 57 (new para 46) Omissions accepted. The change of "Industrial School Leaving Certificate" into "Practice Stage Certificate" is a matter for further consideration.

C H A P T E R IV 124

Para 58 (new para 47) The abbreviation proposed is not so precise as the rules framed by me, but, if the change satisfies Government I have no objection to its adoption.

Para 59 (new para 48) Revised para accepted.

Para 60 (new para 49) Revised para accepted.

Para 61(new para 50) (It is noted that although my use of the word "instructor" is objected to earlier in the Code it is accepted in the later stages.)

Para 61 (new para 50) Revision is not accepted. The question of qualifications is one of the most difficult that I have to deal with and the exercise of discretion on the part of the Director will simply lead to a great deal of dispute and discussion. In matters of qualifications it is absolutely necessary to have some definite standard decided by an outside examining body. During the transition period we might give ad interim certificates, but I consider it necessary to make it clear to industrial schools that the qualification for teachers is in general a thing beyond the personal control of the Inspector or Director.

The following may be added to this para

"During the transition period the Director will award adinterim certifi-

certificates at his discretion, but these will be liable ~~for~~ to cancellation as soon as the Normal Training School is started and regular training courses and certificates introduced.

Para 62 (new para 51) Revision accepted.

Para 63 (new para 53) Revision accepted.

Para 64 (new para 52) Omission of the first sub para and changes accepted, but alteration in position not accepted. Seeing that the old para 63 (revised by the new para 53) begins by " A second condition is...."it must obviously follow old para 62.

Para 65 Omitted---accepted.

Para 66 (new para 54) Revision not understood. An apprentice taking a workshop or theoretical course obviously is a recognised pupil. The revision also leaves out of account all half time pupils which I consider is a class that have to be provided for. I therefore propose to rewrite this para as follows:-

"A recognised pupil in any stage is one who has satisfied the condition for admission to that stage and has not continued in it except with the express permission of the Director for more than the period of the course laid down. He must also satisfy the time conditions viz., 32 hours' practical work per week for full tiiers (including drawing) and 16 hours a week for half timers. The time spent

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by apprentices in theoretical classes may be ~~calculated~~ included in the time counted towards practical work provided that the Inspector approves of the apprentice's receiving theoretical instruction.

CHAPTER V — GRANTS. 127

The heading should be "Grants" not "Teaching Grants" since the first paragraph deals with grants as a whole

Para 67 should, in my opinion, be retained for completemess.

Para 71. Omitted. This para is absolutely necessary for practical reasons. School managers seem absolutely unable to understand the grant system and they never put in applications for grants until the last moment thereby entirely upsetting my financial arrangements. The system of early notification has been in force for the last two years and has worked very satisfactorily.

New para 84. I consider the allotment on the basis of expenditure to be thoroughly unsound, and, under the scheme of grant I have prepared, financial statements were quite unnecessary. Government have, however, modified my scheme and, as a temporary measure, I have accepted the principle of allotting grants on the basis of expenditure. Financial statements are therefore necessary for the time being; but I do not think that any special mention of them should be made here as they have been included in the list of returns.(Vide para 34 of the amended draft Code-- "Returns")

Para 72 (new para 85) Changes are accepted.

New paras 70 to 76

Para 70 falls away in the system of revision I have adopted . The remaining paragraphs do not deal with teaching

grants at all but simply with conditions most of which fall properly in another Chapter.

Paras 71 and 72 may stand as also 73 with modifications. The qualification of instructors (Para 74)appears to me a question of recognition rather than of Teaching Grant as also 'subjects of instruction'. These and para 76 do not logically fall into the teaching grant section.

I propose to revise old paras 73 to 76(which have been omitted)as follows;-

Para 73. (para 75 in my revised draft) Teaching grants will not ordinarily be given or continued to an institution which had not for the previous official year an average daily attendance of 25 pupils.

The Director may, however, relax this rule in special cases.

Para 74 (para 76 in my revised draft) An institution shall not, ordinarily, be eligible to receive the full yearly grant sanctioned for it unless it meets on 180 working days in each year.

Para 75 (para 77 in my revised draft) A school week shall consist of 32 hours of practical instruction or, for half - timers, of 16 hours.

Time spent in drawing class up to a maximum of 3 hours a week may be counted as practical work.

New paras 80 to 82. Accepted.

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C H A P T E R VI

The whole of this Chapter has been rewritten. For reasons above mentioned I see no point in including new para 86, but accept the rest of the changes as they stand except the referenee to appendices the numbering of which requires revision.

C H A P T E R VII

I consider the title "Furniture Grant" quite sufficient. The objection to elaborating heads is that it encourages school managers to apply for articles which they do not really require simply because they are enumerated in the Code.

Paras 83 and 84 have been superseded by new paras 93 to 95.

New para 93 is regarded as superfluous and I am omitting it.

New para 94 is accepted.

New para 95.- I consider that my old para ~~85~~ 84 covers the ground quite adequately and in 12 lines whereas the new para 95 substituted therefor occupies 27 lines and specifies a large number of things that are absolutely unheard of in industrial schools I have never had any applications for grants for maps, chemicals, in connection with expenditure on gymnasia and games etc. and would not feel inclined to give any grants for these purposes.

An extra chapter has been added regarding endowments. During the last

8 years I have never come across any endowments and, from what I can see, there are never likely to be any. The extra chapter appears therefore to be quite superfluous and I am omitting it.

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P A R T III
CHAPTER I

In the heading I observe a printing mistake in the original Code the word "certificates" being printed in place of "scholarships"

Para 1 Substitution of "Practice stage Examination" for "Examination for Industrial School-leaving certificate"---No objection if the name is to be canged.

Omission of the reference to High Proficiency Examination--- High Proficiency Examinations involve no special arrangements and serves to stimulate the desire for improvement. In subjects like Printing in all its branches a High Proficiency standard is necessary and I consider that provision for such examinations should be made.

Paras 2 to 8. All the alterations accepted

Paras 9-10 Vide remarks under Para1 I think these paras should be retained.

Paras 11 to 13 Emendations accepted.

C H A P T E R II

The whole of Chapter II has been omitted. Chapter II was specially written on account of the confusion arising in connection with scholarship applications. For obvious reasons it was considered desirable once and for all to explain all points connected with these things so that the expenditure of annas four on the purchase of a copy of the Code would enable school managers to know what exactly they have to do. I am unable to see any special reasons why the chapter should be omitted, whereas I have the very strongest reasons for retaining it.

This Chapter has been written from practical experience and to meet practical cases. I am therefore quite unable to agree to the omission of this chapter.

The last sentence of para 22 may be changed into a note thereto as follows:-

"This sum will be increased to Rs.5 if candidates are permitted by the Inspector to take up a theoretical course."

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C H A P T E R III

The substitution of "Recognised" for "Regular" in the heading— The substitution is wrong. Regular courses are the complete courses of training provided in industrial schools and it is to these only that the table refers. Indeed an extra sub para has been added to make this point perfectly clear. To substitute the word "Recognised" for "Regular" therefore is to confuse two things.

The minimum period of apprenticeship, for certificate in "Pillow Lace Work" has been changed from 3 to 4--printing error: 3 is right.

The last item in the table viz., "Agriculture" with the remark "will be dealt with by the Agricultural Department" has been deleted. The deletion is characteristic of the way in which the Code has been revised. As Agriculture is not an industrial subject it seems to be thought that all reference thereto may be omitted. It is forgotten that Agriculture is at present a recognised subject, that schools under my control draw grants for teaching Agriculture and that I receive fairly numerous applications for recognition in this subject. Agriculture is generally regarded as an industrial subject and people would therefore expect to find a reference thereto in a Code of Technical Education. The principle on which I work my Code is , when I do not deal with a subject, to tell people

what to do to get the information: the principle on which the revision appears to be based is to omit all references and let the reader guess. The point is not very important but is characteristic and I therefore mention it.

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C H A P T E R IV – Special classes.

This chapter has been entirely omitted. I have to point out that at least three of the five kinds of special classes mentioned have been introduced to cover the instruction which was regarded as necessary by the Committee convened to consider questions of industrial education and for which provision was to be made in the Madras Trades School. In fact it is on these special classes that the industrial education system evolved by me on the recommendation of the Committee is based. Industrial schools as we now know them I regard merely as a necessary evil during the transition period. As we progress industrial schools will be more and more supplanted by "special classes". In these circumstances I cannot help expressing some surprise that this chapter has been cut out. Its omission leaves the proposed teaching in the Madras Trades School entirely in the air, and nullifies certainly more than half the objects of my scheme of industrial education. I cannot agree to its excision.

C H A P T E R V

NORMAL TRAINING.

This Chapter has been completely omitted. Here again I am ~~simply~~ totally unable to understand the policy followed . It is, I think, generally admitted by people who know anything about industrial education that the weakness of the existing industrial system lies in the lack of qualified teachers: that there are no trained teachers and that there is no provision for training. The establishment of a Teachers' College may, for practical reasons, have to be delayed but, to work out a scheme of industrial education and deliberately leave the question of teaching for future reference is so opposed to the whole of my fundamental ideas of organisation that I am absolutely unable to grasp the point of view represented.

To summarise, the revised Code first of all upsets the whole of my arrangement, apparently with the object of bringing it ~~on a~~ line with the general education code. This principle of arrangement as explained at considerable length I am quite unable to agree to, because there is no connection whatever between the two things and, what is more, the proposed parallelism introduces a great deal of irrevalent matter into the Industrial Code by the inclusion of endowments, gymnasia, professorships etc., and omits reference to matters which though possibly unimportant in a general education Code have from experi-

ence

What the Govt have done is to introduce the rules in the National Sch Rules & the Grant-in-aid Code bodily without any alteration, in the Technical Edn Code. The rules will apply so far as they pertain to the system of working followed in the Dist schools.

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been found to be of very considerable importance in industry, I am unable therefore to accept the changes and alterations proposed. If these are insisted on we reach a deadlock and the only thing then is for Government to revise the Code irrespective of the views of their technical adviser.

If my views in the matter of arrangement are accepted it becomes possible to discuss details. This I have done in the foregoing notes and have prepared a revised version of the Code to meet such suggested alterations as I am prepared to accept. Matters of detail are sufficiently dealt with in the notes, but when major alterations involving principles etc., are suggested, ~~the~~ added paras which I think should be deleted are shown with a black marginal line, and paras of my original Code which have been omitted and which I think should be retained are shown with a red marginal line

the fuller view is stated in the revised version.

The principal differences between my *revised* Code and the one revised *by you* (apart from the question of arrangement) are as follows :-

Nomenclature

(1) Change of "Industrial School Leaving Certificate" into "Practice Stage Certificate"

(2) Change of "instructors" into "teachers" As I have explained I consider my wording to be more accurate, but I have no very strong views on the subject, and, if it is considered that the suggested nomenclature is preferable, I have no objection to its adoption provided that the whole Code is revised accordingly.

~~But~~, According to the ~~changes made~~ original remain two different words are ~~now~~ used to mean the same thing.

(2) My original General Education scheme contemplated a regular scheme of general education in connection with industrial education. This scheme has been cut out and I accept the change.

(3) Teaching grants. My proposal was to base ~~the~~ teaching grant on the cost of staff and the number of pupils and not on the cost of maintenance. I feel very strongly that a grant based on the cost of maintenance is entirely wrong on principle; but I also recognise that for the first few years it may be difficult to work the system of grants on the lines suggested by me. As a purely temporary measure I therefore accept the proposal to base teaching grants on expenditure with reservations. (New paras 80 to 82 have been retained)

(4) Scholarships.-The chapter on Scholarships has been omitted. It is not quite clear on what grounds the omission issuggested. Presumably scholarships will continue to be awarded as before. There seems to be no particular reason in favour of the omission while there is very strong reason against it viz., that there exists utmost confusion regarding scholarship regulations owing to the fact that these regulations are nowhere collected and explained.

(5) Special Classes.-The chapter regarding special classes has been omitted. As I have explained in my note it is on special classes

that the future scheme of industrial education is based. To omit them is to cut out the most important and valuable element in industrial education.

(6) Normal Training.- The chapter regarding Normal Training has been omitted. Just as the omission of special classes cuts out the most valuable element in industrial education so the omission of Normal Training precludes the possibility of effecting ~~elementary~~ any improvement in the remaining element viz., ~~educational~~ the industrial school system; ~~and~~ This question has been fully dealt with in the note. I must frankly confess that to consider improvements in industrial education without providing normal training, ~~it~~ seems to me, a sheer waste of time.

(7) Endowments.- The chapter on Endowments has been omitted by me as it serves no useful purpose.

NOTES. Page 140

Code as amended by Govt.

DEPARTMENT OF INDUSTRIES.

CODE OF REGULATIONS

regarding

TECHNICAL EDUCATION.

PART I

GENERAL SCHEME OF EDUCATION.

Chapter I - DEFINITIONS.

Technical education is that particular type of "special education" which has for its object the training of industrially efficient workers. Its value is accordingly to be judged, not by an academic, but purely by a practical industrial standard.

2. Industrial workers are broadly divisible into two classes:--

(1) Those who direct the work;

(2) Those who actually perform the work;

and technical education may be divided into two corresponding classes, the training of the first class of worker being termed technological and that of the second industrial education.

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3. Technological education is intended to afford the higher training necessary for the technical and administrative control of industry and is essentially theoretical in character.

4. Industrial education on the other hand is essentially practical in character, and any theoretical instruction given can be regarded as useful only in so far as it amplifies, explains or correlates the inferences drawn from practical experience.

Chapter II - TECHNOLOGICAL EDUCATION AND ~~TECHNOLOGICAL~~ INSTITUTIONS.

5. The only subjects in which technological instruction is now given in this Presidency are dyeing and leather work. The course for the former is four terms and the fee Rs.15 per term, and the course for the latter six terms and the fee Rs.30 per term.

6. Candidates for admission to these classes should be not under 16, nor over 20 years of age. They must produce satisfactory secondary school-leaving certificates, and certificates of character from their last schoolmaster or employer. Preference will be given to candidates who have undergone at least two years' ~~apprentice~~ training in the workshop of a recognized industrial school or a commercial factory.

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7. Applications for admission should be made to the Director of Industries not later than the 1st March.

8. ~~Attendance and Dismissal~~.--All students must be regular in attendance. Students requiring leave must apply to the Principal of the institution and must not avail themselves thereof without his previous sanction. Continued irregularity or absence without leave will be regarded as a breach of rules and is liable to lead to dismissal.

9. ~~Examinations~~.--At the end of the prescribed course of technical training an examination will be held, on the result of which technological certificates will be assigned, but not awarded unless or until the candidate has completed a further prescribed course of practical training or satisfied the examiners regarding his practical capacity.

10. Technological instruction in textile chemistry, metal work, textile manufacture, electrical engineering and mechanical engineering is given at the Victoria Technical Institute, Bombay. The course covers eight terms in all cases except that of metal work in which case it covers only two terms. The fee is Rs.30 a term for the first two subjects and Rs.25 a term for the rest. To encourage study of these subjects the Madras Government are prepared to give a limited number of scholarships annually to students proceeding to Bombay, subject to the following

rules:--

(1) The value of the scholarship will be Rs.30 a month.

(2) Applications for scholarships should be submitted to the Director of Industries not later than the 1st February in the form printed as appendix _____ written in the candidate's own writing.

(3) Candidates should be either graduates in arts or have passed the Intermediate examination of the Madras University. Candidates 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. The applications should show clearly age, nationality and general educational attainments.

(4) The holders of the 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, however, be required to find two sureties to execute an agreement in the form prescribed ~~which will hereafter be settled by the Director of Industries in consultation with the Government Solicitor~~, providing for the refund to the Government of the amount of the scholarship, should he fail to obtain the diploma granted at the end of the course.

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(5) The scholarships will be disbursed through the Principal of the Bombay Institute. In case the Principal reports adversely about any scholarship holder, the scholarship will be stopped.

Chapter III - INDUSTRIAL EDUCATION.

11. Industrial education is of two types, one suited for the training of what may be termed a journeyman, that is, a man who has merely learnt a trade, the other suited to produce a craftsman, that is, a journeyman with some theoretical knowledge of first principles added to his practical skill.

12. Whilst it is eminently desirable that pupils should have attained a minimum standard ~~xx~~ of general education ~~required~~ before attempting to learn a trade, it is at present generally impracticable to insist on this ~~point~~ and any system of industrial education must therefore make provision not only for practical and theoretical training, but for general education also.

13. General education.- The general education required may be divided into two parts: the first covering the amount of education required by a journeyman, the second covering the extra amount of education required in connection with the craftsman's course. The minimum standard of general education for the former is approximately that of the fourth standard and for the latter that of the fourth form.

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14. Before a student can enter upon the Workshop stage of the Journeyman's course he must produce a certificate from the headmaster of a recognized school to the effect that he has received an elementary education up to the fourth standard and before he can be admitted to the craftsman's course he must produce a certificate to the effect that he has received instruction in English, Mathematics, Science and Drawing approximately equal to that given in the fourth form of a secondary school.

15. Practical Technical Education.--The qualifications demanded of all practical industrial workers are of two kinds:--

(1) Skill;

(2) Ability to apply skill commercially;

and the course of practical instruction will be divided into two parts, the first having for its object the development of skill, the second the practical application of the skill acquired. These two parts will be termed the "Practice" and the "Workshop" stage, respectively.

16. A pupil may complete the "Practice" and "Workshop" stages either as an apprentice in a factory or in an industrial school. The former is preferable.

17. The full period of training in the "Practice" stage is two years, that in the "Workshop" stage

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usually three years, and that for the Craftsman's course is ordinarily two years. Under the apprenticeship system the qualifying period of practical training for a journeyman is ordinarily four years.

~~18. To provide specially for the case of pupils who have little or no general education half-time courses may also be arranged, but this course is not recommended.~~

Practice

18 19. At the end of the ~~practice~~ stage an examination entitled "The practice stage examination" will be held at every industrial school, and no pupil will be allowed to proceed to the Workshop stage until he has passed this test in addition to producing the certificate of general education required by rule 14.

19 20. At the close of the Workshop stage there will be held an examination entitled "The journeyman's examination" ~~and no pupil at an industrial school will be allowed to proceed to the craftsman's course until he has passed this test in addition to producing the higher certificate of general education required by rule 14~~.

20 21. Apprentices are not admitted to the practice stage examination, but apprentices who wish to proceed to the craftsman's course may be admitted to the journeyman's examination at any school under departmental management on producing a certificate of general education of the kind required by rule 14 for admission

to

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to the craftsman's course.

22 82. A certificate entitled the journeyman's certificate will be given to all persons who pass the journeyman's examination.

22 83. Theoretical education.--This may be commenced by a pupil in the workshop stage or an apprentice at any time during the workshop stage that the Inspector certifies ~~the pupil~~ him fit for it. Proof of such fitness will include proof of a satisfactory general education and, in the case of pupils, proof of having passed the practice stage examination.

The whole of the craftsman's course is theoretical.

23 24. At the close of the craftsman's course a further examination will be held entitled the craftsman's examination. All persons passing this examination will be given a certificate entitled the craftsman's certificate.

~~25. In addition to the regular or complete courses of industrial education the scheme defined in this code also provides for special classes that form no part of a regular course of instruction, to which admission is unrestricted and for which no certificates are awarded. These special classes are arranged as required and are more fully described in Part III of this Code.~~

PART II.

INDUSTRIAL EDUCATION.

CONDITIONS FOR STATE AID TO PRIVATE INSTITUTIONS

Chapter I - GENERAL RULES ~~FOR INDUSTRIAL SCHOOLS.~~

The general rules governing industrial schools are the Educational Rules for secondary schools for boys which are reproduced with some slight modifications below. The changes are shown in italics.

2. The recognition of *industrial* schools shall vest in the Director who shall, before according recognition, satisfy himself as to, besides the other matters specified in this chapter, the following:--

(a) *The character of the teaching*, the organization and development of the school.

(b) The educational needs of the locality.

(c) The financial stability of the school.

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(d) The constitution of the managing body.

(e) The scale of fees charged as compared with those charged in other institutions in the same locality.

3. Site, dimensional sketch and accommodation. No school shall be recognised which is held in a building or buildings of which the site, dimensional sketch and accommodation have not been approved by the Director. When the accommodation is added to, the sketch of the additional building must be submitted for the approval of the same authority.

The sketches for all machinery or plant to be permanently erected shall similarly be submitted for approval.

4. The sketch of a school building and of any additions to such buildings shall give full information regarding the superficial and cubic space of the building and of each room in it. It shall also show the exact positions of doors, windows, stairs, etc. The sketch shall be certified correct by the person who has prepared it. The sketch of an old building submitted for purposes of recognition shall also be accompanied by a certificate from the person who has prepared it to the effect that the building is in a state of good repair.

5. The sketch may be prepared by any competent person. Managers who desire the services of an officer of the Public Works Department shall

(5)

apply to the Executive Engineer of the Division (Appendix __).

6. Dimensions of buildings.--The dimensions of the buildings shall be such as to provide at least 8 square feet of area and 80 cubic feet of space for each pupil on the rolls. In calculating the dimensions of buildings under this rule, verandahs which are solidly constructed and on which class rooms open may be included.

7. If any school has a dormitory intended for the accommodation of ten or more pupils attached to it, the dimensions of such dormitory shall be such as to provide at least 30 superficial feet and 400 cubic feet for each pupil. In the case of dormitories intended for less than ten pupils a proportionate increase in superficial and cubic space for every inmate less than ten up to at least 80 superficial feet and 900 cubic feet for a single pupil shall be provided.

8. Sanitary inspection.--Every school building shall be maintained in substantial repair and in a cleanly condition. It shall be subject to inspection by the departmental inspecting officer, and such officers of the medical, sanitary and engineering departments as Government may direct.

9. The following sanitary certificates shall be produced before recognition is accorded and on any subsequent occasion if called for: in the Presidency town a certificate signed by the Sanitary Commissioner, the Deputy Sanitary Commissioner, a District Surgeon, or the Health

Officer of the Municipality: in the mufassal a certificate signed by the District Medical Officer or, if satisfactory reasons are given, by a subordinate Medical Officer (Appendix —)

10. Overcrowding of class-rooms.--No class room, laboratory, or workshop shall be permanently used as such by a larger number of pupils than the Inspector or Sanitary Officer has declared it sufficient to accommodate. The dimensions of each room shall be clearly indicated on the wall thereof.

11. Latrine.--Every school shall be provided with a suitable latrine.

12. Protection from small-pox.--The presence of pupils unprotected from small-pox may be regarded as a sufficient cause for withdrawal of recognition.

13. Furniture, apparatus and appliances.--Every school shall be provided with the furniture, apparatus and appliances declared by the inspecting officer to be necessary for the standard of instruction up to which it teaches and with the gymnastic apparatus prescribed in Appendix —.

14. For every payment of fees a pupil shall receive a receipt signed and dated by the manager or some one deputed by him. The receipt should show the class in which the pupil is reading.

15. No pupil shall be newly admitted in any industrial school except on an application in the prescribed form signed by his parent or guardian ~~and~~, if he is a major, by himself. All such letters of application shall be filed

separately in the records of the school.

16. No pupil who has previously studied in any recognized industrial school shall be admitted to another industrial school, unless he presents a transfer certificate in the prescribed form (Appendix) from that school, showing (a) the date of his birth, (b) that he has paid all fees due to that school, (c) the class in which he studied at the time of leaving it and (d) if he has completed the course in that class, whether he is qualified for promotion to a higher class. No pupil shall be allowed to attend school pending formal admission or enrolment, and no pupil shall be admitted or enrolled pending the production of an industrial school transfer certificate if due. If the pupil is alleged not to have attended any industrial school previously, an ordinary school transfer certificate may be accepted: if he is alleged not to have attended any school at all, the manager of the industrial school must prepare a declaration stating that, to the best of his

knowledge

knowledge, the pupil has received no previous education of any kind. All transfer certificates and declarations shall be endorsed with the admission number under which the pupil is enrolled. They shall be separately filed and shall be shown to the inspecting officer when required.

No pupil who has not attended a school in the first term shall be admitted in the second term unless the head of the institution is satisfied among other things that the non-attendance of the pupil in the first term was due to unavoidable circumstances. Such admissions shall be scrutinized by the inspecting officer at his inspection of the school.

17. Application for a transfer certificate shall be made in writing by the parent or guardian of the pupil or by the pupil himself if he has attained his majority

In the event of the Managers refusing or delaying to give a transfer certificate, the parent or the pupil if of age or guardian of the pupil shall have the right of appeal to the Inspector, whose decision shall be final unless he thinks it necessary to refer the matter to the Director.

18. The manager of the school into which a pupil seeks admission shall not apply for a certificate to the manager of the school which such pupil is leaving, but shall leave it to the parent or guardian of the pupil to apply for such certificate.

19. The manager of the school into which a pupil is admitted shall place him in the class for which he is found fit, subject to revision by the Inspector. He shall prepare and submit to the Inspector at the next annual inspection a statement showing the previous school history of each pupil admitted since the last inspection.

20. Before granting a transfer certificate the manager is entitled to claim the term fee for one term only and that the term in which the last attendance of the pupil is registered.

21. If a pupil is found to have obtained admission by means of a false certificate or false representations of any kind, he shall be summarily dismissed with forfeiture of whatever fees he may have paid.

22. In the event of a pupil's being formally expelled on account of grave misconduct, the manager shall record his reasons for the dismissal or expulsion and report the fact at once to the parent or guardian of the pupil, and within seven days to the Inspector. A pupil thus dismissed or expelled from one school shall not be admitted into any recognized school within a period to be determined by the Director on the Inspector's recommendation.

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under Rules 21 & 22

23. When a pupil is dismissed or expelled the manager shall not grant a transfer certificate until the expiration of the period for which the Director has debarred the pupil from admission into a recognised school.. After that period has expired the transfer certificate shall be granted subject to the above rules; but in such cases the manager shall endorse it with the words "dismissed for false representation," or "expelled for misconduct," as the case may be.

24. The rules of discipline shall include the following:--

(a) Every pupil shall in the workshop and the class room wear a clean and respectable dress, and in all cases where good manners require it, a suitable covering for the head.

(b) No pupil shall be allowed to sit in a class room with his shoes on, unless they are shoes of an English pattern and unless socks and trousers are worn also. But in plague-infected areas shoes of an English pattern together with socks may be worn in class even if trousers are not worn.

(c) Every pupil shall salute the instructors on the occasion of his first meeting them for the day within the school precincts.

(d) On the instructor's entering the class room the pupils shall rise and remain standing till they are desired to sit or till the instructor takes his seat.

(e) No pupil shall be allowed to leave the workshop or class room without the permission of his

his instructor, or until work has been stopped.

25 30. (i) Every school shall keep in the prescribed form and submit to the Inspecting officer, when required, the following :—

(1) A register of admissions and withdrawals (Appendix M).
(2) A register of attendance for pupils (Appendix N).
(3) A term fee register (Appendix O).
(4) A time-table.
(5) A register of attendance for masters (Appendix R).
(6) An acquittance roll (Appendix R).
(7) A log-book.
(8) A library register.
(9) A register of scholarships (Appendix Q).
(10) A cash book showing all receipts and expenditure.
(11) A register of furniture, books and appliances purchased with the aid of grants from Public Funds (Appendix ~~RR~~).

N.B.—The log-book shall be kept by the principal teacher, who shall enter in it from time to time such events as the introduction of new books, apparatus, or courses of instruction; any plan of lessons approved by the Inspector, the visits of Managers; absence, illness or failure of duty on the part of any of the staff; or any special circumstances affecting the school that may, for the sake of future reference or for any other reason, deserve to be recorded. No reflections or opinions of a general character shall be entered in the log-book. A visitors' book also should be kept in which officials belonging to other departments and other visitors to the school may be invited to make remarks.

26. Attendance registers.--Separate registers shall be maintained in each subject as follows:--

(a) For pupils in the practice section. Recognized and non-recognized pupils must be differentiated.

(b) For recognized apprentices in the workshop section.

(c) For recognized apprentices attending the theoretical courses.

(d) For paid workmen in the workshop.

Every school shall submit punctually such returns as may from time to time be prescribed,

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27 ~~31~~. In order to allow of the gradual development of a school, recognition may be granted to one or more classes at a time subject to the above-mentioned conditions and to the other rules contained in this chapter and in ~~particular to Rule 62~~. Chapter III

~~28 32~~. A recognized school shall not, without the previous sanction of the Director, open a class or classes either higher or lower than those for which the school has been recognized. When such classes are opened with proper sanction a formal application for recognition shall be made within six months from the date of opening them, and if recognition is not accorded the classes shall be closed at the end of the term in which the refusal of recognition is communicated. The rules relating to admission and withdrawal, discipline and registers shall be observed with respect to such probationary classes.

28 29. When a school or any of its classes has ceased to fulfil the conditions of recognition, or when the educational needs of the locality no longer require its existence, the Director shall withdraw the privilege of recognition from that school or class.

~~29 30~~. A school or class, from which the privilege of recognition has been withdrawn, owing to its having ceased to fulfil the conditions, shall not be restored to that privilege, until it has been certified by the Inspector that the defects which led to the withdrawal of recognition have been remedied, and that in all other respects the school or class fulfils the prescribed conditions.

~~30~~ 31. If a recognized school ceases to exist or is transferred to a different locality or

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different managing body its recognition lapses and for the purpose of future recognition it shall be treated as a new school.

30. Courses of instruction may be prescribed from time to time for all recognized industrial schools.

Chapter II - ~~GENERAL RULES REGARDING~~ ORGANIZATION, MANAGEMENT AND STAFF.

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31. The organization of the school shall be as follows:--

The institution shall be in charge of a manager who shall be an individual of sufficient general education and administrative experience to qualify for such a post.

The management of the workshop shall be in the hands of a superintendent who shall be an individual qualified by practical industrial experience of modern manufacturing methods and a thorough practical knowledge of his trade or craft.

32. When a superintendent possesses the dual qualifications necessary for manager and

superintendent, he shall be competent to exercise both functions, and even when the two appointments are separated, the superintendent shall have unhampered control of the practical side of the work.

3376. The instructors should either be of proved ability or should hold certificates approved by the Director.

3488. Without the sanction of the Director the strength of a class ~~in the workshop section~~ shall not continuously exceed 30, or 20 if it is a class for theoretical instruction.

There should be an instructor for every class. Each instructor of a class in the Practical stage should be assisted by a foreman.

3588. Industrial school system.--In the practice ~~section~~ stage a minimum of 32 hours a week must be devoted to practical industrial work (including drawing).

3628. The full period of training in the practice ~~section~~ stage is 2 years and in the workshop ~~section is~~ stage usually 3 years. Any proposed increase or decrease in the specified period of training in the case of any pupil or apprentice must receive the sanction of the Director of Industries. If such sanction is refused, the pupil or apprentice may be retained at option as a paid workman in the workshop, but his name may not be included in the official register of apprentices.

3709. Apprentice system.--Where schools are permitted to admit apprentices direct into the workshop without previous school training, the period of training is that specified in Part III,

Chapter II, in connection with the apprentice system.

38. Practical courses.--Industrial school system.--Practice stage.--The minimum age for admission to an industrial school is 12 years. No educational qualification is prescribed for admission.

39. Workshop stage.--The minimum age for admission into the workshop stage is 14 years.

The qualification ordinarily prescribed for admission into the workshop stage is the practice stage certificate.

40. Apprentice system.--Workshop stage.--Schools may admit apprentices direct to the workshop stage, but every such admission must be sanctioned by the Inspector.

In the application for sanction the reasons for omitting the practice stage must be fully explained and the previous industrial career of the applicant set forth. The sanctioning order must be filed for reference with the school transfer certificates and declarations.

41. All apprentices who prove unsatisfactory as such are to be removed from the official registers as soon as possible, though they may, at the option of the manager, be retained as paid workmen.

Every apprentice will be paid according to a schedule prepared by the manager. Payment may be on a time or work basis at option, but must be proportionate to outturn.

42. Theoretical courses.--No apprentice may be

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admitted to the theoretical courses unless he possesses the requisite general educational qualification and holds ~~a~~ a practic stage ~~certificate~~ certificate. In the case of apprentices admitted direct into the workshop, the second qualification will not be required, but in all cases admission to these classes will be subject to the approval, in writing, of the Inspector and, in general, admission will be refused to all individuals who have not shown marked ability.

Candidates must not be under sixteen years of age and must produce a letter of recommendation from the manager of the industrial school last attended or from their present employers.

43.05. Fees and stipends.--Schools should levy fees, if possible. If this is done, they must be levied on a uniform scale.

Where stipends are given they should ordinarily be confined to the practice ~~section~~ stage. In the workshop ~~section~~ stage a pupil must be encouraged to earn his living and no assistance must be given to apprentices. Stipends may, however, in special cases, be given to apprentices attending theoretical courses.

Stipends, if given, must be given on uniform scales in each class, but where hostel accommodation is provided, deductions may be made for such part of the cost of a pupil's (board) and lodging as may be regarded as properly debitable to industrial education. If, for instance, this portion is estimated to be Rs.2 per mensem and a pupil also ~~receives~~ 8 annas per mensem pocket money, his stipend is Rs.2-8-0 and must be so shown. In this case, outside pupils attending the school must be paid Rs.2-8- 0 in cash.

A schedule of stipends in the form given in Appendix IX is to be submitted annually.

Scholarships The number and value of the scholarships available in technical schools and the conditions attached thereto will be notified every year in the list of George Gazette.

44. Attendance and dismissal.--Pupils must be regular in attendance. Repeated late attendance, idleness, absence from class, as well as absence without leave, renders pupils liable to dismissal.

45. Examinations.--A promotion examination shall be held annually, on the strength of which promotions will be made. The examination results must be sent to the Inspector as soon as possible. If any extraordinary promotions are made, these should be brought to the notice of the Inspector for approval..

46. Special classes.--Ordinarily schools will only be permitted to provide the regular courses of industrial training, i.e. up to the practice stage certificate, journeyman or craftsman standard. In particularly well equipped and managed schools permission may be accorded for the introduction of ~~the~~ special classes ~~detailed in Part III, Chapter IV.~~

Chapter III - CONDITIONS FOR RECOGNITION.

47. In order to qualify for aid, schools must be recognised. Application for recognition must be made on the form shown in Appendix XXXX.

Recognition involves approval of manager and superintendent, instructing staff, courses of instruction and number of pupils.

48. The lower stage must always be recognized first before recognition is extended to the higher. Thus there can be no recognition in the workshop stage till the practice stage has been

recognized or in the theoretical classes till the workshop stage has been recognized.

Recognition of managers & superintendents

49. Recognition of managers and superintendents is at the discretion of the Director and is good only in respect of institutions and subjects in respect of which recognition has been given. Every application for such recognition must be accompanied by a full statement of the applicant's qualifications and training. Whenever a substantial change in the course of teaching is made or a manager or superintendent is transferred to another institution, a fresh application for recognition must be made.

Instructors

50. Applications for recognition of instructors, including drawing masters, must show their qualifications and training and the subjects which they are employed to teach. Recognition will be at the discretion of the Director.

Courses

51. Only subjects in respect of which a school is recognized should be taught. Recognition will depend primarily on the qualifications of the manager, superintendent and instructors to teach the subject in question. A subject may be recognized as far as the practice, workshop or theoretical stage.

Numbers

53. A second condition is that there should be not less than a minimum number of recognized pupils. This is fixed at 30 for a school as a whole and 15 for any one stage of instruction.

Special conditions of recognition in the Workshop stage

52. Recognition up to the workshop stage will be conditional on the maintenance of proper

workshop accounts and on these accounts, if not actually showing a profit, at least bearing testimony to a business-like and commercial system of manufacture. If these conditions are not fulfilled, recognition in the workshop stage will be withdrawn, though schools may, if they wish, continue to run their workshop on their own lines provided that none of the rules contained in this code ~~are~~ infringed thereby.

54. A recognized pupil in any stage is one who has satisfied the conditions for admission to that stage and has not continued in it (except with the express permission of the Director) for more than the period of the course laid down. An apprentice taking a workshop or theoretical course may be a recognized pupil.

Chapter IV - CHARACTER, OBJECTS AND GENERAL CONDITIONS OF AID.

55. Grants-in-aid to industrial schools are governed as far as possible by the rules of the Grant-in-aid Code which is applicable to schools in general. The present chapter reproduces chapters I and II of the Code with necessary modifications. The modifications are shown in italics.

56 GRANTS-IN-AID.—A sum of money is annually set apart to be expended under these rules as grants-in-aid of schools and other educational institutions under private management with the object of extending and improving ~~secular~~ education, and such grants will be given impartially and without reference to any religious instruction to all schools which impart sound ~~secular~~ instruction, subject to the conditions hereinafter specified and with due consideration of the requirements of each locality, and of each institution, and of the funds available.

industrial

~~industrial~~

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57. RESERVATION OF DISCRETION BY GOVERNMENT.—The Government reserve to themselves, anything in the rules of this code notwithstanding, the right to refuse or to withdraw any grant at their entire discretion.

Grants will ordinarily be withdrawn from a manager if he or any of the teachers employed by him takes part in political agitation directed against the authority of Government or inculcates opinions tending to excite feelings of political disloyalty or disaffection among the pupils.

Definitions of terms

58. The term "Director" signifies Director of Industries; the term "Inspector" signifies the Inspector of Industrial Schools; the term '*Local Board*' includes a Municipal Corporation or Council or a District or Taluq Board; the term '*Local Funds*' includes Municipal or District or Taluq Board Funds; the term '*President*' includes the Chairman of a Municipal Corporation or Council; and the term '*Manager*' includes a Board of Managers.

59. OBJECTS FOR WHICH AID MAY BE GIVEN—

(i) Grants are given for teaching.

(ii) Grants are also given for—

(1) the payment of stipends to teachers under training;

(2) the erection, enlargement and purchase of school buildings and hostels or boarding houses for students attached to educational institutions;

(3) the purchase of school and hostel furniture, apparatus, chemicals, and appliances; of books for school libraries; and of the plant, materials and tools required for laboratories and workshops;

(4) the cost of needlework or other art and industrial exhibitions;

(5) the endowment of professorships, lectureships, teacherships, scholarships, laboratories, workshops, museums and other educational objects.

60. Sanctioning authority.--Except in cases in which a reference to Government is required, all grants paid from Provincial funds are sanctioned by the Director or the Inspector as the case may be, and all grants paid from Local Funds are sanctioned by the Local Board concerned, provided that the grants have been recommended by the ~~Educational~~ of Industries Department.

61. Interpretation of rules.--The interpretation of any rule in this Code shall, in the first instance, rest with the Director; provided that no interpretation of a general nature shall be binding on a manager which has not been approved by Government and notified in the Fort St.George Gazette.

(67)

67. Appeal to sanctioning authority.--An appeal shall lie to the sanctioning authority for the revision of its orders.

68. Appendices to have effect of rules.- The appendices to the Code shall have the same effect as the rules of the Code and shall be treated as part of the Code.

64 MANAGEMENT.—Every institution on behalf of which aid is sought shall be under the management of one or more persons recognised by the department, who, in the capacity of proprietors, or of trustees, or of members of a committee elected by the Society or Association by which the institution is maintained, shall undertake to be answerable for the maintenance of the institution and the fulfilment of all the conditions of recognition and aid including the due enforcement of such rules of discipline as are prescribed from time to time.

The management may, with the approval of the department, appoint a person as correspondent to transact the current business of the institution with the department.

Applications for change of management of an institution should be made to the Director.

65. DECLARATION BY THE MANAGEMENT.—Every application for aid shall be made in such form as may from time to time be prescribed, and shall contain a declaration, signed by the correspondent, to the effect that the conditions of recognition and aid laid down in the ~~Madras Education Rules and in the~~ Technical Education Grant-in-Aid Code are being and will continue to be fully observed, excepting any rules from which the institution may be specially exempted, and that the management is prepared to subject the institution, together with its current, endowment, and trust accounts, its establishment, time-table and registers, to inspection, and to furnish such returns as may be required by the department.

66. RESERVATION OF RIGHT REGARDING THE USE OF BOOKS.—Government reserve to themselves the right to forbid or to prescribe the use of any book or books in aided schools ~~and colleges.~~

Managers of schools shall, as a condition of receiving grants-in-aid from public funds, be required not to use, without the express sanction of the Director of ~~Public Instruction~~, any text-book which is not included in the authorized list of text-books, which may from time to time be issued by him.

67. INCOME TO BE DEVOTED TO EDUCATIONAL PURPOSES.—No aided institution shall be allowed to spend any portion of its income for other than educational purposes.

68. RESERVATION OF RIGHT REGARDING EMPLOYMENT OF TEACHERS.—It shall be competent to the Director of ~~Public Instruction~~ to forbid the employment in aided ~~colleges and~~ schools of any teacher whose certificate has been withdrawn after due enquiry or who after due enquiry has been considered by him unfit to be a teacher.

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14A. RULES OF DISCIPLINE.—The rules of discipline in aided ~~colleges~~ schools shall include the rules prescribed in chapter ~~VIII-A of the Madras Educational Rules for colleges under public management~~ above.

In the case of a professor or lecturer who violates rule 6 of the said rules, it shall be the duty of the management or governing body of the ~~college~~ school at which he is employed to check such abuse; and if the governing body fails to do so, action may be taken ~~under section 24 of the Indian Universities Act.~~ for the withdrawal of recognition or aid from the school.

Chapter V - Teaching staff.

70. The system of teaching staff in industrial schools follows that for secondary schools in Chapter IV of the Aid Code so far as possible. The chapters reproduced below with changes in italics indicated by ~~in the margin~~ are

71. AVERAGE DAILY ATTENDANCE OF PUPILS.—A grant shall not ordinarily be given or continued to an institution which had not for the previous official year an average daily attendance of 25 pupils.

The Director may, however, relax this rule in special cases.

72 ~~24~~. NUMBER OF SCHOOL MEETINGS.—An institution shall not, ordinarily, be eligible to receive the full yearly grant sanctioned for it unless it meets on 180 school days in each school year.

73 ~~25~~. DEFINITION OF SCHOOL DAY.—The school day shall consist of at least four hours of ~~secular~~ instruction; but two meetings, each of not less than two hours, whether on the same day or on different days, shall be counted as one school day.

74. Qualifications of ~~teachers~~ instructors.--The instructors should either be of proved ability or should hold certificates approved by the Director.

75 ~~27~~. SUBJECTS OF INSTRUCTION.—The subjects of instruction in aided schools shall be those included in the courses of instruction and standards of examination laid down in Vol ~~Part~~ II of the Technical Education Code.

76 ~~28~~. PROTECTION FROM SMALL-POX.—(i) No teacher, who is not protected from small-pox, shall, without the express and previous sanction of the Director, be permanently employed in an aided institution.

(ii) In the case of institutions for boys and for Indian Christian girls, the manager shall not admit as a pupil any one who is not protected from small-pox by vaccination or otherwise.

77 ~~29~~. APPLICATION FOR AID.—Application for first admission to aid shall be made in the prescribed form (Appendix ~~X~~ XV) before the 1st July to the Inspector ~~or Inspectress~~. The application shall be accompanied by such returns as the Director may from time to time prescribe with the view of ascertaining the financial position of the school and its eligibility for aid.

78 ~~30~~. ADMISSION TO AID.—The Director shall determine what institutions shall be admitted to aid after taking into account the character, the efficiency and the financial condition of the institutions, the educational needs of the locality and the funds at his disposal.

79 ~~31~~. WITHDRAWAL FROM AID.—The Director may, after giving due notice, withdraw aid from an institution, should the financial condition of the institution or the educational needs of the locality cease to warrant its continuance.

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~~80~~ 82. INCOME FROM PRIVATE SOURCES.—The grant will be considered as supplementing the income guaranteed from endowments, subscriptions, donations and other private sources over and above any expenditure incurred by the management on scholarships or in defraying any difference between the fees calculated at standard rates and those actually collected.

81. The teaching grant for each school will for the present be fixed by the Director every year on a consideration of the inspection report for the past year, and the budget for the ensuing ~~year~~ one, and the general utility of the school and the amount contributed from private sources, provided that no grant shall be given that amounts to more than half the net cost of the school after excluding the amount contributed by the management, without the express sanction of Government.

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~~82~~ 83. AMOUNT OF GRANT PAYABLE.—The amount of grant payable in any year will ordinarily be the amount allotted.

The amount may be increased if any additional standard has been opened with the approval of the department or on account of any other approved increase in expenditure.

The amount may be decreased should it be found to exceed the amount permissible in accordance with the principle laid down in rule ~~28~~; or should the expenditure be considered unreasonable; or on account of a deterioration in efficiency; or on account of failure to remedy defects in organization, discipline, instruction and accommodation pointed out in writing after a previous inspection; or as the effect of the operation of rule ~~24~~ or ~~26~~; or on account of an insufficiency of funds.

~~83~~ 84. PENALTIES.—The Director may, on the report of the inspecting officer, after enquiry, withhold, reduce, or suspend the grant on account of falsification of the registers, or misrepresentation regarding fees, attendance or other matters or violation of any of the conditions of recognition or aid, or other proved fraud or irregularity.

~~84~~ 85. FINANCIAL STATEMENT.—The management shall submit to the Director through the Inspector, not later than 1st May of each year a statement in the prescribed form (Appendix ~~W~~.

~~85~~ 86. PAYMENT OF GRANTS.—(i) Grants for a year may, on or after 1st August of that year, be drawn on a bill prepared in the prescribed form (Appendix ~~W~~) and countersigned by the Inspector.

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(ii) On receipt of the countersigned bill, the manager shall endorse it and present it for payment at the nearest treasury. Bills received by the manager during March shall be cashed before the 15th of that month.

(iii) Any adjustment which, in consequence of the operation of rule ~~24~~ or for any other reason it may be found necessary to carry out in a grant once paid may be made in the grant for the following year.

Chapter VI - BUILDING GRANTS.

86. The system of building grants in industrial schools follows that for ordinary schools in Chapter VIII of the Grant-in-aid Code. The chapter is reproduced below with suitable changes which are shown in italics.

£1,000/

87. ~~50~~. OBJECTS OF AID AND SANCTIONING AUTHORITY.—Grants not exceeding Rs. ~~2,500~~ may be sanctioned by the Director for any of the following purposes :—

(1) Purchasing, erecting or enlarging school houses or buildings or students' hostels including residential quarters for the warden or other staff attached to the hostel.

(2) Executing extensive alterations and repairs to buildings which have been newly purchased for school purposes.

(3) Acquiring land for school or hostel purposes.

£1,000/

Grants exceeding Rs. ~~2,500~~ require the sanction of Government.

~~88~~ 87. CONDITIONS OF GRANT.—(i) In the case of new buildings, extensions or alterations, the Director must have been convinced of their necessity and have approved their character. In the absence of the special permission of the Director or the Government these must not have been commenced before the sanctioning of the grant.

In the case of purchases of land or buildings the Director must either have been consulted before the purchase was made or be convinced that land previously purchased is to be newly devoted to an educational purpose.

(ii) Rooms in school and hostel buildings for the construction of which a grant is sought must be of not less than the following dimensions :—

Dormitories must be large enough to allow, if for a single pupil, 80 superficial feet and 900 cubic feet, if for more than one pupil a proportionately diminishing space down to 30 superficial feet and 400 cubic feet per head for ten or more pupils. A space of at least 8 superficial feet and 80 cubic feet per head should be provided in every room used as a class room, dining room or for any other dwelling purposes other than sleeping.

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~~52.~~ BUILDING GRANT PROCEDURE.—(i) Applications in the prescribed form (Appendix ~~XX~~) shall be submitted through the Inspector, ~~except in the case of first-grade colleges,~~ accompanied by such outline plans as will enable the Director to judge of the suitability of the proposal from an educational point of view. The Director shall inform the correspondent whether he is prepared to consider the question of a grant, making, if necessary, alterations of the plans a condition of his so doing.

(ii) If the Director's reply be favourable the correspondent shall then submit to him, in duplicate, detailed plans, specifications and estimates (which may include architect's and draughtsman's fees) prepared by a professional person. When a grant-in-aid has been promised in respect of any building, the management shall, prior to the commencement of work thereon, give fifteen days' notice in writing to the Executive Engineer in charge of the division wherein it is proposed to construct the building.

(iii) During the progress of the work, access thereto and every reasonable opportunity to inspect and examine materials and take measurements shall be afforded by the management to the officers of the Public Works Department.

NOTE.—Any correspondent contemplating building operations for which he desires a grant from Government should apply to the Inspector for—(1) a form of application for grant and (2) instructions for the preparation of plans and estimates.

90 ~~53.~~ PAYMENT OF GRANTS.—(i) Before the grant is paid in full it shall be certified in the prescribed form (Appendix ~~XX~~) by the Engineer or other responsible officer deputed to examine the building that the work has been completed in accordance with the approved plan and estimate, or that the building is worth the amount on which the grant is claimed. Such certificate shall be countersigned by the Director.

(ii) Before any grant is paid the owner (or, in cases in which the permission of the Director has been obtained, the management) of the property may be required to execute a mortgage of the property or a deed of acceptance in respect of the grant. Until further orders the forms of the various deeds shall be as shown in Appendices ~~XX XX XX~~

87/ "(iii) Grants sanctioned for any of the purposes mentioned in rules ~~50~~ (1) and (2) except the purchase of buildings shall be drawn on bills prepared in the form printed as Appendix S."

87/ "Grants sanctioned for the purchase of buildings or for the purpose mentioned in rule ~~50~~ (3) shall be drawn on bills prepared in the prescribed form printed as Appendix SS."

(iv) Advances may be made from time to time out of the sanctioned grant provided that the Director is satisfied that the working is proceeding satisfactorily.

91. (i) The grant promised shall not exceed in the case of buildings to be erected one-half of the total cost of the work shown in the management's estimates as approved by the Director and modified by the Public Works Department and in the case of buildings or lands acquired one-half of the Collector's estimate of the value of the same."

(ii) The amount of grant to be actually disbursed shall be regulated by the actual cost of the work as finally completed. The grant promised with reference to the approved plans and estimates will be the maximum that will be paid, but the amount to be disbursed shall in no case exceed one-half of the actual cost of the work as finally executed. Before making payment the Director will require the management to furnish vouchers or certificates showing the actual amount expended by them in completing the work.

92. "*Claims of the Government.*—If a building, for the acquisition, construction, extension, alteration or repair of which a grant has been drawn, or if land, for the acquisition of which a grant has been drawn, has, prior to the expiration of forty years from the date of payment of the grant, been diverted to purposes other than educational purposes approved by the Government, the manager shall refund such portion of the grant as may be determined by Government. If the manager fail to make such refund, the Government may recover the amount by such means as they may think fit."

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Chapter VII - ~~FURNITURE GRANTS~~.

GRANTS FOR FURNITURE, BOOKS AND APPLIANCES.

93. The rules in regard to these grants for industrial schools are the same as those in Chapter IX of the Grant-in-aid Code. The latter are reproduced below with slight modifications which are shown in italics:--

94 ~~36~~. APPLICATIONS FOR AID.—Applications for grants under this chapter, which shall be in the prescribed form (Appendix ~~X~~), and which shall be submitted through the Inspector so as to reach the Director not later than 1st May, shall be accompanied by details showing the number, description, and price of each article which it is proposed to provide.

95. ~~35~~. OBJECT AND PROPORTION OF AID.—(i) Grants not exceeding one-half of the total cost may be given for furniture, and for apparatus, chemicals, maps, diagrams and models; for books and non-Indian periodicals for school libraries; in connection with expenditure on gymnasia and games (provided that the expenditure is to be incurred upon objects of a permanent or semi-permanent nature); for the plant, materials and tools needed in industrial and technical schools; and for needle work or other art and industrial exhibitions.

(ii) Grants shall not be given to meet the cost of seats or desks of a pattern which has not been approved by the department.

(iii) ~~Except~~ In the case of industrial ~~and technical~~ schools, aid ~~shall not, as a rule~~, be afforded for the purchase of articles to be used by the pupil, as distinguished from those required by the teacher in giving instruction. ~~But in special cases grants may be given for books and slates for the use of pupils,~~ on condition that the ~~books and slates~~ orders remain the property of the school, are used by the pupils during school-hours only, and are not removed from the premises.

(iv) Grants shall not be given for articles regarding which the Director has not been consulted and for which aid has not been promised previously to purchase or manufacture.

96. ~~35~~. PAYMENT OF GRANT.—The grant shall be paid only on submission, before the date specified in the order sanctioning the grant, of vouchers duly receipted. It shall be drawn on a bill prepared in the prescribed form (Appendix ~~X~~).

~~NOTE.—The Superintendent of Sanskrit Schools has been authorised to countersign the furniture grant bills of Sanskrit schools.~~

97 ~~39~~. CLAIMS OF THE GOVERNMENT.—If an institution which has received aid under this chapter, is closed within five years from the date on which a grant under this chapter is drawn, the Government shall be at liberty to purchase the articles, towards the supply of which the grant was given, at a valuation to be made by an officer to be deputed by the Government for the purpose.

98 ~~39~~. GRANTS BY WHOM SANCTIONED.—Grants exceeding Rs. 1,000 are sanctioned by the Government; grants of Rs. 1,000 and under by the Director

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Chapter VIII - GRANTS TOWARDS ENDOWMENTS.

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99. The rules in regard to the payment of these grants for industrial schools are the same as those in Chapter XI of the Grant-in-Aid Code. These are reproduced below.

100. ~~67.~~—OBJECT AND PROPORTION OF AID.—Grants not exceeding one-half the amount given or devised may, with the sanction of the Government, be made for the endowment of professorships, lectureships, teacherships, scholarships, laboratories, workshops, museums and other educational objects.

101. ~~68.~~ CONDITIONS OF AID.—The following are the conditions under which grants shall be given :—

(i) The endowment shall consist of Government securities to be invested in the names of trustees approved by the Government.

(ii) The endowment must not be created from moneys derived either directly or indirectly from ordinary, funded or school income.

(iii) The trust-deed, which must be approved by the law officers of the Government, shall contain a provision that, in the event of the object for which the endowment was created ceasing to exist, or of the management ceasing to comply with any of the conditions of the trust, the fund shall be distributed as provided therein.

(iv) The trustees shall render yearly accounts to the Director in the prescribed form (Appendix ~~X~~).

(v) The endowment of professorships, lectureships or teacherships shall provide for the current salaries of particular professors, lecturers, or teachers ; and no salary towards the endowment of which a grant has been paid shall be included as admissible expenditure for the purpose of determining the amount of aid to be given to a school or college.

102 ~~69.~~ PAYMENT OF GRANT.—The grant shall be drawn on a bill prepared in the prescribed form (Appendix ~~XI~~).

103. ~~70.~~ LIMITS IN THE CASE OF GRANTS FOR PRIZES.—No grants shall be given towards any prize endowment of the value of under Rs. 1,000, nor shall the amount of grant given towards any prize endowment exceed Rs. 1,000.

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PART III.

INDUSTRIAL EDUCATION.

EXAMINATIONS, CERTIFICATES AND COURSES.

Chapter I - EXAMINATIONS AND CERTIFICATES.

(Regular Courses).

In the regular courses of Industrial Education examinations are held as follows:--

The practice stage examination on the completion of the practice stage.

Examination for journeyman's certificate on the completion of the workshop stage or practical course.

Examination for craftsman's certificate on the completion of the workshop stage plus the theoretical course.

2. The practice stage certificate is a continuous record of a pupil's progress similar to the Secondary School leaving certificate in the Department of Public Instruction. It must be posted regularly by the school authorities. The final examination will be held twice a year in April and October, by the school authorities in the school itself and the results of the examination will be communicated to the Inspector. On his next visit he will verify the results by a personal

personal inspection or examination of the pupils and their papers and will, if satisfied, endorse the certificate. If he does not regard any pupil, though passed, as fit for a certificate he may put him back one or more terms.

A pupil will not be certified as having secured the practice stage ~~examination~~ certificate unless he can produce a certificate from the headmaster of a recognized school to the effect that he has received an elementary education up to the fourth standard.

3. The Journeyman's examination for which apprentices will enter on completing the prescribed journeyman's period (of training) under the school system will be held twice a year in May and November and will be conducted by a Board of Examiners appointed by Government. The examination will be held in Madras and, if necessary, at other stations to be notified. It will be of an entirely practical character, and will last about a week. There will be two kinds of passes; ordinary and with distinction.

4. Under the apprenticeship system practical experience is acquired in a workshop and an apprentice obtains only his theoretical training in the school. Apprentices who have received their practical training in this manner may, however, present themselves for the journeyman's examination

if they wish to do so, subject to the conditions laid down in the next paragraph.

5. Application for admission to the examinations described in the preceding section must be made to the Director of Industries not later than 15th March or 15th September in each year. Forms of application for this, and all other departmental examinations may be obtained from the Director of Industries (Appendix ~~XXXX~~). The admission fee is Rs.2-8-0. Every applicant for admission to the journeyman's examination must submit a copy of his practice stage ~~examination~~ certificate and a certificate from the manager of the industrial school at which he is studying to the effect that he has finished the prescribed course of practical training.

Every apprentice trained in a workshop must, in lieu of the above certificates, submit a declaration signed by his employer to the effect that he has undergone a period of apprenticeship at least equivalent to that prescribed in paragraph 29 for the craftsman's certificate. He must also submit a certificate of conduct from the Principal of the school last attended.

6. The craftsman's examination, for which journeymen will enter on the completion of their theoretical training, will be held twice annually in May and November, immediately after the journeyman's examination, and will be conducted by a Board of Examiners appointed

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by Government. The examination will be held in Madras and, if necessary, also at other stations to be notified and will be written and oral, but the examiners will not be precluded from applying practical tests if these are considered necessary. There will be two kinds of passes: ordinary and with distinction.

7. Application for admission to this examination must be made as in paragraph 5. The admission fee is Rs.5. With his application each candidate must submit a copy of his journeyman's certificate if he already possesses one together with evidence of general education up to fourth form. Only candidates who have been duly registered as pupils in a recognised industrial or trade school will be allowed to enter for this examination.

8. The craftsman's certificate constitutes a dual qualification, theoretical and practical, and will not be awarded unless candidates satisfy the examiners in both branches. The two examinations may, however, other conditions being satisfied, be taken independently.

9. No examinations will be held and no certificates (beyond certificates of attendance) awarded in connection with any classes or courses other than those above specified.

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10. The public examinations will be conducted by a body of examiners appointed by Government on the nomination of the Examination Committee. The Examination Committee will consist of seven members, the Director of Industries being ex-officio Chairman and the Inspector of Industrial Schools ex-officio member and Secretary. The remaining members will be appointed by Government and will hold office subject to the approval of Government for three years. Preference will be given to representative employers of labour. The Director of Industries and the Inspector of Industrial Schools will not actually undertake examination work, though they are empowered to attend examinations. There is nothing to prevent other members of the committee being appointed examiners.

11. The committee will nominate examiners to the number of at least two for each subject (or three if the number of candidates exceeds 50). Examiners will be appointed annually.

Scholarships

12. The number and value of scholarships available in technical schools and the conditions attached thereto will be notified every year in the Fort St.George Gazette.

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Recognized

Chapter II - ~~REGULAR~~ COURSES.

~~(Complete course of training).~~

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12 13. The regular courses of training which will be recognized in industrial schools are set forth in the following table.

Drawing for a period of not more than three hours a week forms an integral part of the course in the practice ~~section~~ stage.

" Schedule of regular ~~(complete)~~ courses of Industrial Eduaction.

Name of journeyman's course.	Practical course for journeyman's certificate.				Apprentice system.	Extra theoretical course for craftsman's certificate.				Name of craftsman's course.
	School system.					Minimum period of apprenticeship for certificate.		Theoretical course.		
	Practice stage—Name of class.	Duration.	Workshop stage—Name of class.	Duration	Period of workshop training.	School system.	Apprentice system.	Duration.	Number of subjects. *	
		YRS.		YRS.	YRS.			YRS.		
Turner's and fitter's work.	Mechanical work.	2	Fitter's and turner's work.	3	4	5	4	2	4	Mechanic.
Blacksmith's work ..	Do.	2	Blacksmith's work.	3	4	5	4	2	4	Do.
Foundry work ..	Do.	2	Foundry work.	3	4	5	4	2	4	Do.
Electric fitting ..	Do.	2	Electric fitting.	3	4	5	4	2	3	Electrician.
Metal work	Do.	2	Metal work ..	2	3	4	3	1	2	Metal worker.
Plumbing	Do.	2	Plumbing ..	2	3	4	3	1	4	Plumber.
Carpentry	Wood work ..	2	Carpentry ..	3	4	5	4	2	3	Carpenter.
Joinery	Do.	2	Joinery ..	3	4	5	4	2	3	Do.
Cabinet making ..	Do.	2	Cabinet making	3	4	5	4	2	3	Do.
Compositor's work ..	Printer's work.	2	Printer's composition.	3	4	5	4	2	1	Compositor.
Proof reading ..	Do.	2	Proof reading ..	2	4	5	4	2	2	Proof reader.
Press work	Do.	2	Press work ..	3	4	5	4	2	2	Press worker.
Bookbinding	Bookbinding work.	2	Bookbinding ..	3	4	5	4	2	1	Bookbinder.
Printer's warehouse work.	Do.	2	Printer's warehouse work.	2	4	5	4	2	1	Printing warehouse man.
Boot making ..	Leather work ..	2	Boot making ..	2	3	4	3	..	1	Boot maker,
Harness making ..	Do. ..	2	Harness making	2	3	4	3	..	1	Saddler.
Dress making ..	Needle work ..	2	Dress making ..	2	3	4	3	2	2	Dress maker.
Embroidery	Do. ..	2	Embroidery ..	2	3	4	3	2	2	Embroiderer.
Pillow lace work ..	Pillow lace work.	2	Pillow lace work.	2	4	4	4	2	2	Lace maker.
Tailoring	Tailoring ..	2	Tailoring ..	3	4	5	4	1	1	Tailor.
Handloom weaving ..	Hand-loomweaving.	2	Handloom weaving.	2	3	* 4	3	2	2	Hand-loom weaver.
Carpet weaving ..	Carpet weaving.	2	Carpet weaving.	2	3	4	3	2	2	Carpet weaver.

* *Vide* Vol. II. page 3.

Scott. II—10 (a)—12-1-16.

Home (Edn.) DEPARTMENT

Code of regulations for industrial schools.

Recording papers relating to the proposal to publish a separate ——— in the Presidency.

READ AGAIN G.O. No. ....., dated ..... 191 .

" " " " ....., " ..... 191 .

READ ALSO:—

C. No. 744/15 From the D. I. ; No. E 44, dated the 26. 2. 1915

" " ....., " " ....., " ....., " ..... 191 .

" " ....., " " ....., " ....., " ..... 191 .

" " ....., " " ....., " ....., " ..... 191 .

ORDER.

No. 164, dated 13. 2. 1917.

Misc.

Printed for record.

Recorded.

DA
7.2.17.
MM
14/2/17

Ed
12.2.17

Despt
return Home

Receipt acknowledged
14.2.17

To

The officer in charge
of the Dept of Industries
(Edn)

GOVERNMENT OF MADRAS
HOME DEPARTMENT
(Education)

I

READ—the following papers :—

Letter—from K. T. B. TRESSLER, Esq., Director of Industries.
To—the Secretary to Government, Educational Department.
Dated—Madras, the 26th February 1915.
No.—E. 44.

In submitting herewith, in consolidated form, my proposals dealing with the question of technical education, I have the honour by way of preface to invite attention to the history of technical education in this Presidency.

2. The development of technical education until the year 1903 is given in a note submitted by Mr. Cardew to the Industrial Conference held at Ootacamund in 1908, and added as an appendix (A) to this letter. At that conference, the question of technical education was discussed in a comprehensive manner and certain resolutions were formulated which are given in appendix (B).

3. As will be observed from Mr. Cardew's note, technical education was, in the year of the Ootacamund conference, still in a somewhat primitive condition. During that year a more progressive policy was decided on, and as a first step in the direction of development the Madura Technical Institute was acquired by Government and plans were prepared for its conversion into a first-class centre for technical instruction. At the same time the question of a comprehensive system of similar centres of technical instruction in other parts of the Presidency was considered.

4. Of these centres Madras was one, and in G.O. No. 28, Educational, dated 16th January 1912, a committee was appointed to consider the question of a Government Technical school in Madras. The scope of the school was in this case limited to mechanical engineering and the committee submitted its report in March 1912.

5. In the course of investigation it was however found that there were very serious practical difficulties and drawbacks associated with the establishment of State-managed schools at other centres. As an alternative to the system of State-managed schools, as originally proposed, it was decided to develop existing private institutions at the required centres, this course appearing to represent both the simplest solution of the problem and also the one most likely to lead to effective results.

6. Accordingly negotiations were entered into with the following private institutions, viz. :—

St. Aloysius' Industrial school	Vizagapatam.
Local Fund Workshop	Cocanada.
Public Works Workshops	Dowlaishwaram.
Do.	Bezwada.
St. Joseph's Orphan Industrial school	Tindivanam.
St. Francis Xavier's Industrial school	Tanjore.
St. Joseph's Industrial school	Coimbatore.
Basel Mission	Calicut.

7. Meantime considerable changes had taken place in the constitution of the department. The post of the Director of Industries was abolished by the Secretary of State early in 1911 and the special post of Superintendent of Industrial Education (subordinate to the Director of Public Instruction) created in its place, the officer holding this appointment dealing exclusively with technical education. This arrangement proved unsatisfactory in practice and the Government of Madras addressed the Secretary of State with a view to the restoration of the *status quo*. Orders were received, re-establishing the post of Director of Industries early in 1914, but during the interval, on account of uncertainty regarding the future and other causes, little progress could be made with the technical education schemes and when details came to be considered new difficulties appeared.

8. Mr. Cardew's note makes it clear that the existing system of technical education, evolved out of Mr. Grigg's original scheme in 1882 was in many respects unsatisfactory. Centring as it did around a system of "Technical Examinations" of the original South Kensington type, it lacked co-ordination with practical requirements. Hence, as a preliminary to any further development of technical education a new code was obviously necessary. Again, the scheme for the development of existing institutions to serve as centres of technical education, when practically considered, was found to require a great deal more working up before it could be reduced to a workable form.

9. Early in 1914 the Department of Industries was recreated and not till then did it really become possible to take active steps in the matter of technical education. Some little time previously the plans for the Madura Technical Institute had been completed and on the reconstitution of the department the work of preparing a draft code for technical education was taken in hand. With a view of making this code thoroughly practical in character, I suggested to Government the appointment of two committees: one representative of educational opinion, the other representative of technical opinion, to discuss the draft code. At the same time Government considered that the scope of the Madras Trade school, as outlined in the Government Order of 1912, might with advantage be extended so as to include trades other than mechanical trades and nominated a Committee (G.O. No. 780, 4th July 1914) to deal with this question of this school. So far as general educational questions connected with the code were concerned, Government did not consider it necessary to nominate a special committee, as advocated by me, but suggested that the committee appointed, the members of which represented technical opinion, might be invited to state their views and that individual representatives of educational opinion might be consulted unofficially.

10. This suggestion was followed; on September 8, 9 and 11 the educational representatives held an unofficial meeting and on September 10 and 12 and November 27 the official Committee met. The only drawback of this arrangement was this: that the latter committee's report deals with two things: first (unofficially) with technical education generally, secondly (officially) with the practical details of the Madras Trade school, and is therefore of a composite character.

11. As regards the development of private institutions I have in a note, copy of which is appended—appendix C, explained the form which, in my opinion, Government action must take, viz., to build schools and leave them to private agency for a period of 20 years. In accordance with this view I have prepared specific proposals regarding such of the above mentioned institutions as I have so far been able to come to terms with, viz., St. Aloysius' Industrial school, Vizagapatam, Waltair, St. Joseph's Orphan Industrial School, Tindivanam, and St. Josoph's Industrial school, Coimbatore.

12. It is clear that the present position is rather involved and in order to keep the issues separate I propose to deal with the problem of technical education in the following letters:—

(1) General covering letter.
(2) (*a*) Reports of the official committee, and
(*b*) Do. unofficial committee.
(3) Proposals for the Madras Trades school based on the recommendations of the official committee—
(*a*) Curriculum.
(*b*) Buildings.
(4) Code for technical education based on the recommendations of the unofficial committee.
(5) Proposals arising from the code—
(*a*) Endowment of the Victoria Jubilee Technical Institute, Bombay.
(*b*) Normal Training school.
(6) Proposal for Waltair school.
(7) Do. Tindivanam school.
(8) Do. Coimbatore school.

13. Nos. (6), (7) and (8) will follow shortly. Other proposals of a similar character, *e.g.*, the development of the Local Fund Workshop at Cocanada, the Public Works Workshop at Bezwada, the St. Francis Xavier's Industrial School at Tanjore, etc., will be submitted as they mature.

14. To give Government some idea of the expenditure involved I give below an approximate statement of total cost:—

		Capital. Rs.	Recurring. Rs.
Madras Trades school, Washermanpet,—Building	..	40,000	
Do. do Equipment	..	10,000	33,000 *
Do. Vepery— Equipment	..	20,000	
Endowment of Victoria Technical Institute	.. ..	25,000	10,000
Normal Training school including—building for Vepery Branch of Madras Trade school — Land	..	70,000	1,500
Building.		50,000	..
Waltair		80,000	Ordinary grant-in aid.
Tindivanam		70,000	
Coimbatore		70,000	
		4,35,000	

* Excluding Principal. The same staff is available also for the Normal Training school.

15. Before anything can be done it is necessary that my proposals should be generally approved or rejected. Possibly, however, there may be difficulties in the coming year on account of shortage of funds and in this case I recommend that my proposals be taken up as follows:—

The scheme that can, with the least disadvantage, be allowed to lie over is that for the endowment of the Victoria Technical Institute.

Further, considerable changes will have to be made in the Tindivanam and Coimbatore schools before they come up to the standard required by the new code, and I think it will be sufficient for the present if the land is acquired—merely as an earnest of Government intention and an encouragement to the schools to carry out their reforms. The land acquisition will probably not cost more than Rs. 10—15 thousands.

16. The Waltair school should be pushed on with. This scheme has now been hanging fire for four or five years and some sort of action would appear to be imperative Moreover this school is already up to standard: the managers have a good deal of

plant which they will lend to the school for a time, so that the cost of development will be comparatively small. For the former reasons also, the school is likely to develop into a useful centre of instruction much more rapidly than any other.

17. The establishment of a Normal Training school is an immediate necessity and this part of the programme must be carried out at the earliest possible date. In connection with this school that part of the Madras Trades school which is to be located at Vepery can be developed without much extra cost, but if funds do not permit of it, I would suggest that the other part of this Trades School to be located at Washermanpet be held over for a time.

18. No recurring expenditure can in any case be incurred during 1915–16 as none of the schools will be ready before that date. My minimum scheme for expenditure therefore works out as follows :—

—	—	Capital 1915–16.	Capital 1916–17.	Recurring. 1916–17.	Capital 1917–18.
		Rs.	Rs.	Rs.	Rs.
Normal Training school	Land	70,000*	..	33,000	12,000
	Building	30,000	20,000		
	Equipment	6,000	..		
Waltair school	Land	2,000	..	Ordinary grant-in-aid.	
	Building	40,000†	..		
	Equipment	..	30,000		
Madras Trades school, Washermanpet.	Building	..	40,000	Included in Normal Training school.	
	Equipment	..	10,000		
Endowment of Victoria Technical Institute, Bombay.	....	..	25,000	10,000	
Tindivanam school	....	15,000	1,35,000	Ordinary grant-in-aid.	
Coimbatore ,, ...	....				
Total ..		1,63,000	2,60,000		

* Part payment may be made by the award of compensation land elsewhere.
† Rupees 10,000 to be budgetted this year.

In conclusion I wish to express my indebtedness to the various gentlemen of the Committees for the extremely valuable assistence they have rendered me in the preparation of these schemes, and to Dr. Marsden for his work in connection with the Committees.

Appendix A.

Note on technical education in Madras. By the Hon'ble Mr. A. G. Cardew. Industrial Conference, Ootacamund, 1908.

The modern development of technical education in Madras owes its origin to the late Sir Mountstuart Grant Duff who was Governor of this Presidency from 1881 to 1886. The Education Commission of 1882 had left the subject of technical education untouched. In their instructions to the Commission the Government of India, as yet intent only on literary education, had remarked that to extend the enquiry to technical education "would expand unduly the task before the Commission." In Madras the College of Engineering, the Agricultural College, Saidapet, and the School of Arts were already in existence, but no attempt had been made to develop any general system of technical education. The only industrial schools in the Presidency were two orphanages at Rāmnād and Nazareth, two schools for Eurasians in Madras and a small school under missionary management in the Tanjore district. Sir Mountstuart Grant Duff's attention appears to have been drawn to the subject of technical education by the report of the Royal Commission on Technical Education in England which was appointed in 1881 and which submitted its final report in April 1884. On the 1st September 1884 the late Mr. Grigg, then Director of Public Instruction, was called on to submit proposals for the encouragement of scientific and technical education in this Presidency.

2. Mr. Grigg's proposals, contained in letters, dated 3rd September 1884 and 31st March 1885, set out a comprehensive scheme of development divided into three main sections. The first place was given to the establishment of a system of higher examinations in technical subjects. Mr. Grigg believed that "to institute public examinations in any suitable branches of knowledge is to create a demand for instruction in them." He accordingly proposed to start

examinations in some sixty branches of technical science, art and industry. But he did not rely solely on examinations. The second part of his scheme included the provision of grants-in-aid to institutions providing facilities for industrial and technical education and the grant of scholarships to pupils undergoing such instruction, besides grants for machinery, plant, apparatus and chemicals. These provisions were to be embodied in a special chapter of the Grant in-Aid Code and the grants were on a liberal scale, 25 per cent. above the standard rate. Thirdly, Mr. Grigg proposed the development of the College of Engineering, the School of Arts and the Agricultural College into institutes dealing with the several connected branches of technical works. The College of Engineering was to teach the various branches of Engineering, with subsidiary subjects, machine construction and the like. The School of Arts was to add to its curriculum decorative metal work, wood-carving, cabinet-making, furniture and architectural wood-work, pottery, glass manufacture and carpet-weaving. The Agricultural College was to teach, besides agriculture, agricultural chemistry, geology, physiography, forestry and surveying, plan-drawing and veterinary surgery and medicine. Improved provision for instruction in biology and chemistry was to be made in the chief first-grade colleges, while practical training in industries was to be provided in the workshops of the Madras Municipality and Madras Railway.

3. Mr. Grigg's proposals were favourably received by Government. In G.O. No. 377, Educational, dated 3rd June 1885, high appreciation was expressed of the care with which the scheme had been drawn up. A Committee to elaborate the plan of technical examinations was at once appointed. The new chapter of the Grant-in-Aid Code was sanctioned and the "gradual extension of work" at the Agricultural College and the School of Arts was approved. But the extension of the scope of work undertaken at the College of Engineering was negatived, and no notice was taken of the suggested use of Railway and Municipal workshops for practical training. The Government, like the Director, gave the first place to examinations, and prompt action to start these tests was taken. The Committee appointed to fix the character of the syllabuses and the details of the examinations submitted its report in November 1885 together with a draft notification and syllabuses for examinations in 63 subjects, and in G.O. No. 198 of the 31st March 1886, Educational, the notification and syllabuses were finally approved and sanctioned and the first technical examinations were ordered to be held in the month of August following.

4. The examinations thus created were originally divided into two grades called Preliminary and Advanced; but when the Middle School Examination was abolished in 1889 the scheme of technical examinations was revised in order to include those elementary technical subjects which had hitherto formed a part of that examination and the technical examinations were now divided into (1) the Lower or Elementary examination, and (2) the Higher examinations in two grades, the Preliminary and the Advanced. In December 1891, the name of the examinations was changed to the "Government Technical Examinations" and the three grades were designated Elementary, Intermediate and Advanced, and in 1892 the notification and the syllabuses relating to the examinations were again revised and received their existing form. The examinations, which now include 93 subjects, are regulated by Notification No. 18 of the 25th January 1893, which declares their object to be "the encouragement of scientific and technical instruction, with special reference to manufactures and industries and generally to the necessities of the practical side of life."

5. These technical examinations have attracted a considerable number of candidates. In the ten years ending 1906 as many as 22,527 candidates have passed the three stages—Elementary, Intermediate and Advanced. An analysis of these passes is given below. Table No. 1 shows the number of candidates who have passed in each group and subject in these examinations. It will be observed that out of 22,527 passes as many as 18,954 are accounted for by five groups of subjects:—

(1) Agriculture	1,062
(2) Sanitary Science	1,483
(3) Civil Engineering	3,456
(4) Commercial subjects	5,203
(5) Drawing	7,750

In the remaining subjects the great mass of passes have been in the Elementary or Intermediate grades, only 138 passes in the Advanced examinations having been secured in ten years. In Chemistry, the foundation of so many industries, no pass in the Advanced examination has been secured, and the total number of passes in the Elementary and Intermediate tests has been only 49.

* * * * *

The progress which has been brought about by the institution of these examinations and the provisions which were added to the Grant-in-Aid Code will be apparent from Table No. III which shows the technical and industrial schools now existing in the Presidency. In the educational returns these are divided into two classes: first, higher class schools in which the standard of instruction is equal to the elementary or higher grades of the technical examinations, and second, lower class schools which adopt a lower standard regulated by the Madras Education Rules. The former class of schools is again of two kinds: (*a*) those which give instruction in subjects coming under two or more groups of the Technical Examination scheme, and (*b*) those which give instruction in only one such group.

* * * * *

8. The cost at which this progress in technical education has been made will be apparent from the following figures, in which the expenditure on technical education during the last ten years is compared with the total expenditure on education :—

Expenditure on Technical Education.

Year.	Total expenditure to education.	Total expenditure on technical education.
	Rs.	Rs.
1897–1898	66,86,435	1,87,776
1898–1899	69,12,173	1,96,084
1899–1900	69,29,266	2,19,701
1900–1901	71,76,850	2,17,638
1901–1902	76,61,012	2,66,958
1902–1903	84,81,460	2,69,351
1903–1904	86,22,864	2,48,930
1904–1905	86,50,460	2,90,699
1905–1906	90,84,226	2,98,761
1906–1907	94,59,318	2,99,365

9. It will be apparent from these facts and figures that, though some progress has been made in technical education since Sir Mountstuart Grant Duff first drew attention to the subject in 1884, and though some twenty-five lakhs of rupees have been spent thereon during the last ten years the general result is, as the Director of Public Instruction remarked in his report for 1906–1907, still far from satisfactory. "Out of the large population of this Presidency" he wrote "less than three thousand children were receiving technical instruction in the various handicrafts and of these less than nine hundred were non-Brahmin Hindus, the class of the community "to which the bulk of hereditary workers in wood and metal and textile fabrics belong. There is "as yet little demand for technical education, and the little advance that has been made has "practically left unaffected the great mass of the industrial population." It will be noticed that of the five thousand children shown in table IV as receiving technical instruction a large proportion were studying such subjects as book-keeping, commercial correspondence and drawing.

10. The causes which have led to the failure of Mr. Grigg's scheme of 1884–1885 are not far to seek. In the first place only part of that scheme was carried out, some of the most valuable suggestions contained in it being allowed to drop out of sight. The attempt moreover to create examinations without first providing qualified teachers and adequately equipped training institutions was to reverse the true order of progress. Most important of all was the neglect to bring the scheme of technical education into relation with the industrial needs and conditions of the country. It was not sufficient to draw up syllabuses ranging from copperplate engraving to embroidery. Some effort was necessary to connect the new system of technical education with existing industries, the great hand-loom industry, the indigenous dyeing industry, the nascent cotton factory system and so on Even in providing scholarships for the encouragement of handicrafts, sufficient care was not taken to see that they were reserved for members of the artisan classes. The scholarship notification, which is published annually in the *Fort St. George Gazette* stipulates only that the candidates shall have been for a year a student in a recognised technical class, and the scholarships given by local bodies have not usually even this stipulation. The caste system of the country being thus ignored, the scholarships too often fell to youths who had not the least intention of following the industry as a livelihood and who merely drew the scholarship while it lasted and then betook themselves to the role of clerk, peon, policeman or whatever the customary occupation of their class might be. It is thus not surprising that though a large number of persons have passed the technical examinations which Mr. Grigg established the general effect of the scheme on the industrial progress of the country has been slight.

* * * * *

APPENDIX B.

Resolutions passed at the Industrial Conference, Ootacamund, September 1908.

* * * * *

Technical Education.

12. This subject should be divided into two parts :—

(i) Industrial Instruction.

(ii) Technical Education.

13. The object of technical education is to train a student to apply theoretical principles to practical purposes and to make use of theory in solving such problems as arise in carrying out manufacturing processes. Technical education must be based upon scientific education.

14. The object of industrial education is instruction in the performance of definite operations and need not necessarily involve the teaching of general principles but only of their application.

I. Industrial Instruction.

15. Industrial instruction should arise out of and be developed to suit the needs of some existing industry started for experimental purposes.

16. It is desirable that a list should be made of the trades and manufactures in this Presidency which are of sufficient importance to justify the establishment of special industrial schools in relation to them.

17. The Conference is of opinion that industrial schools should be located in a centre where the connected industry is carried on, and there is no objection to two or more industries being taught in one institution. It is desirable, where an industry has been started for experimental purposes, that industrial classes should exist in connection with it.

18. The number of industrial schools in the Presidency should be increased and the status of those already established should be improved.

19. The primary object to be aimed at by industrial schools should be the improvement of the quality of the work of the hereditary artisan classes. A secondary object will be the instruction of others than these, who may submit themselves to training. Such schools need not necessarily be self-supporting but the courses of instruction should direct attention to the importance of efficient and economical manufacture and of arriving at the true cost of the work turned out. The success of a school, in the matter of grant-in-aid, should be judged of largely by the economy of the outturn even if such outturn should not contribute appreciably to reducing the cost of the working of the school itself.

20. In Industrial schools it is not objectionable to employ workmen with whom the boys may be associated in the execution of orders. It should be an important function of such schools to provide advanced courses of instruction for craftsmen and artisans who have already learnt their trade in the bazaar or village. No general education classes should be attached to these schools but, as far as possible, only pupils who can read and write their own vernacular fairly well should be admitted. Those who cannot may be admitted as half-time pupils. The work in them should be more intimately connected with the requirements of the people of the country than has hitherto been the case.

21. The management of industrial schools other than those started by private agencies should be vested in the department, and the appointment of a whole-time Inspector of Industrial schools is recommended.

22. Scholarships or stipends may be given to students in industrial schools, but such scholarships or stipends should be confined to members of the artisan castes or to others whose families are already engaged in the trade. Wages may be paid to those who are capable of doing remunerative work.

23. In view of the expected increased use of machinery in agriculture and in village industries, the Conference is of opinion that efforts should be organised for passing large numbers of the hereditary village artisans—chiefly smiths and carpenters—through the well-equipped workshops which are usually to be found at district headquarters, whether in charge of the Public Works or the District Board Engineers, and that the suitable equipment of such shops, for the purpose in view, under the advice of the Director of Industries would be a proper outlet for the expenditure of public funds.

24. It is also desirable that skilled mechanics qualified to instruct village artisans in accuracy of work, in the use of special tools, and in the repair or manufacture of simple machines, such as iron ploughs and agricultural implements, iron and sugarcane mills, etc., should tour in, the villages and hold free instructional classes at various centres.

25. The Conference recommends that a few simple text-books relating to the industries of the Presidency may be prepared and translated into the vernaculars and made available to the public on payment.

26. The Conference is of opinion that provision should be made in the curriculum of studies of all secondary schools for males for compulsory manual training including the use of tools during certain hours in the week.

27. It is desirable that local industrial committees consisting of persons in the trade or especially interested in industrial work be formed for assisting the Director of Industries with their advice.

II.—Technical Education.

28. The Conference is of opinion that it is desirable that the control of any Technological Institute and of technical education should be under the Director of Industries.

29. The College of Engineering in Madras should be expanded into an Institute of Technology with complete laboratory and workshop equipment; and education should be imparted in it in Engineering in all its branches, in Applied Chemistry and such other technical subjects as are suited to the needs of the country.

30. It is desirable that arrangements should be made to enable students from this Presidency to take full advantage of the facilities offered by the Indian Institute of Science at Bangalore.

31. Scholarships should be provided to enable young men in the Presidency to take advantage of facilities for technical education in other parts of India.

Appendix C.

Note.

The question of providing more extensive facilities for Industrial Education has for some time past been engaging the attention of Government, but no definite system has as yet been evolved, partly on account of the indefiniteness of the Educational policy hitherto pursued and partly on account of the constant changes in the character of the proposals submitted from time to time by the school authorities concerned.

2. It has been evident to me from the first that under existing conditions it would be impracticable for Government themselves to conduct a large number of institutions and I have throughout regarded the development of certain existing schools now under private management as the only way of providing extended facilities for Industrial education. This principle I still adhere to.

3. In the practical application of this principle, I proposed in the first instance to start composite schools, *i.e.*, to allot funds to selected schools for the development of their premises, the schools themselves also subscribing part of the cost of the extensions contemplated. This scheme is all very well on paper, but when I came to work out practical details I found firstly that most schools would be unable to subscribe an appreciable amount towards the extension and secondly that the question of dual ownership that would arise would make any dissolution of the agreement arrived at between the Government and the school extremely difficult and unpleasant.

4. I do not apprehend any serious differences of opinion between Government and the management or if such differences did arise, that they could not be settled by an amicable agreement. It is clearly to the interest of both parties to continue any arrangement made for at least the full period of the agreement (20 years) and it is reasonable to suppose that both sides recognize this fact and will try to work in harmony. At the same time, in order to avoid any possibility of misunderstanding, I consider it essential at the very outset to state specifically how the terms of the agreement would operate in every conceivable contingency and for this reason I think it necessary to discuss the eventuality of the agreement being terminated.

5. Under the dual ownership scheme the termination of the agreement might be a matter of considerable difficulty. The scale of the proposed schools would probably be in excess of that which the school authorities themselves would require: one part of the school buildings would probably be the absolute property of the school authorities — the other being Government property. Most of the school authorities are missionaries and the school would probably have been built in the middle of a mission settlement on mission land. The mission would be given the option of buying out Government, but it is doubtful if they would do it and if Government bought out the mission there would almost certainly be unpleasantness over the acquisition of their property and subsequent trouble when another agency — either Government or a private body—took over the school premises for purposes of independent instruction.

6. For these and other reasons I have come to the conclusion that the only workable plan is for Government to construct schools of its own and lease them to private bodies to work, the full time of the lease (in accordance with the usual Government rule) being 20 years.

Under this scheme the general conditions are as follows.

7. The schools must be built on Government land, and all the buildings will be Government property. It may prove convenient to the leasing body to have the school built near their own premises on land owned by them. In this case the land must be sold by them to Government outright. Government must also have the right of purchasing at any time any building situated on this land at a price to be fixed before the agreement is entered upon.

In such a case, when the land has been purchased from the lessee the buildings put up by Government will become the absolute property of the lessee after 20 years continuous lease. When the land is Government land the buildings also become the property of the lessee after the period above stated, subject to the condition, however, that ground rent is paid to Government and that Government is at liberty to resume the land and buildings *without compensation* if they cease to be used for purposes of Industrial Education or if the land is required by Government for public purposes.

8. The lease may be terminated by Government on account of non-fulfilment of the Government rules by the lessee on account of insufficiency of pupils (the average attendance should not fall below 30) or on account of the abandonment of Industrial Education by the lessee. When the reason for the termination of the lease is default by the lessee due notice will be given and the lessee will be allowed a year in which to rectify the defects brought to notice. If, after that period, the condition of the school is not satisfactory the grant may be stopped altogether. If, after another year the school still fails to satisfy the requirements of the Code the lease will be stopped.

The lease may be terminated by the management on giving two years' notice.

9. When the school is built on land purchased from the school authorities, these authorities shall in the event of a cancellation of the lease have the right of pre-emption at the following rates :—

Land—Original purchase price.
Buildings—Original value less 2 per cent. annual depreciation.
Plant—Original value less 8 per cent annual depreciation.
Payment being made in three equal annual instalments.

If the school authorities fail to complete payment, Government shall have the right of refunding the amount already paid and taking over the school or if the balance is small, to remove and use for their own purposes any plant or movable fittings of value equal to the sum owing, or to close the transaction in any other manner that may appear desirable.

If the authorities do not wish to exercise the right of pre-emption Government shall have the right of taking over the school *in toto* on payment to the mission of the predetermined value of the buildings erected by the authorities on the site taken over.

When the school is situated on land not purchased from the school authorities, Government shall, in the event of a cancellation of the lease be at liberty to dispose of the property at its discretion.

10. During the time that the school authorities are in charge of a Government school they shall be responsible for the maintenance of the plant and buildings.

The schools would be Government schools and as such no religious instruction could be allowed in the premises. Different denominations would also have to agree to hostels of other denominations being erected and placed under the management of wardens of that denomination if required. Subject to the condition that all admissions would have to be made on ability, the management would be entitled to nominate 40 per cent of the pupils to be admitted the remaining 60 per cent being open.

II

Letter—from K. T. B. Tressler, Esq., Director of Industries.
To—the Secretary to Government, Educational Department.
Dated—Madras, the 26th February 1915.
No.—E. 44.

I have the honour to submit herewith for approval my draft code for technical education. I am conscious of its imperfections, but in extenuation must explain firstly that it has had to be prepared in such time as could be spared from ordinary routine work and secondly that it is a work of an entirely novel character in India and had therefore to be undertaken without any guidance in the form of accumulated experience.

2. With a view to preparing the code, I last year spent a portion of my leave in studying the system adopted by the London County Council Educational Authorities: I have also to some extent followed the French and Belgian systems as illustrated by the Ecoles des arts et des métiers at Lille, Charleroi and elsewhere. I had intended to study the German methods also, but my time at home did not permit of my proceeding there.

3. It will be observed that I have drawn a sharp line of demarcation between technological and industrial education, as I define these terms in the code: also that the code deals mainly with the latter type of education.

4. In the preparation of this code I have paid due attention to the recommendations of the un-official committee convened by me for the purpose of discussing technical education and to the recommendations of the official committee convened by Government in G.O. No. 780, Educational, dated 4th July 1914. The recommendations are enclosed as appendices (A and B).

5. As regards technological education only two points call for the consideration of Government. The first is my proposal to endow the Victoria Technical Institute, Bombay, so as to acquire a prescriptive right to send students there. After mature consideration, I have come to the conclusion that under existing conditions it is very much cheaper and more satisfactory to deal with technological education in this manner than to try experiments of our own. I enclose as an appendix (C) a report on the Victoria Technical Institute written after my visit there in October. My suggestion is a donation of Rs. 25,000 and an annual subsidy of Rs. 10,000 as explained in another letter.

6. The second point is that of scholarships and stipends. It will be observed that I propose an all-round stipend of Rs. 10 per mensem for all pupils sent to Bombay and an extra Rs. 25 for a limited number who are granted scholarships. The expenditure on scholarships Government can control by limiting the number. As regards stipends the Government liability would at first sight appear to be

unlimited. Actually, however, these stipends are for "approved" pupils only and "approval" lies at the discretion of the Director. This officer is scarcely likely to approve of anything but really promising material, and if the material is promising it seems a false policy to limit the numbers under training for the sake of the saving of a few hundred rupees.

7. During the present year six scholarships were offered at Rs. 30 per mensem. From this figure it may be argued that the payments I propose are reasonable. Of the applicants I should regard four or so as fit for scholarships and six more as suitable for training. I do not anticipate therefore that during the next five years the average number sent to Bombay will exceed twenty and if we allow five scholarships the cost of the aid to pupils is—

	Rs.
Sixty pupils (3 years) under training at Rs. 120 per annum ..	7,200
Fifteen Scholars (3 years) at Rs. 300 per annum	4,500
	11,700

This scheme of scholarships and stipends requires the approval of Government.

8. As regards the system of industrial education proposed in my code, I have been compelled, in order to satisfy all requirements, to provide for five different types of instruction (excluding popular lectures). What the schools require is a system of education that takes in entirely raw material and turns out a hall marked workman or craftsman. This system I have called the regular course of industrial education.

9. As applied to schools it consists of three stages: an elementary practical training stage (practice stage), a practical training stage in which work is carried out on commercial lines (workshop stage), and a theoretical training stage in which pupils of promise learn something of the theory of their work. But practical work as part of a school course of training is a purely artificial arrangement and a modification of this "regular education" system provides also for practical experience being acquired in the normal manner in a workshop. In such cases, however, the training may require to be supplemented by demonstration and instruction and this adjunct to practical training acquired in a workshop is represented by "extension classes."

10. In addition, facilities must be provided for men of ability to go beyond the average. These facilities are provided by the "High proficiency courses."

In all these cases the scheme of instruction applies only to individuals who are qualified or are about to qualify practically in the subject in which instruction is given. But there appears to be a demand also for a type of instruction that does not provide a complete course of instruction but merely affords opportunities for individuals interested to learn something about a trade. Those opportunities are provided by the "Trade instruction classes" which are also of a purely practical character.

Finally there is a demand for theoretical instruction in subjects not included in the regular courses and to meet this demand the fifth type of instruction is provided.

11. Except in the regular courses of education, the training provided is not complete and no certificates are to be awarded. The other courses are provided to meet a popular demand but do not receive the hall mark of the department. The principle underlying my scheme is that practical training is the essential feature of industrial education. This is what the regular course is intended to secure and no certificates are given except when the practical training has been approved by careful examination. Further, theoretical instruction is limited to pupils who have been approved by the department as likely to profit by this kind of instruction and is deferred until the practical training has reached a point at which there is strong reason to suppose that it will be duly completed. My object here is to prevent pupils getting a smattering of theoretical knowledge without a thorough practical backing.

12. In Industrial schools, only the regular courses are provided and the system of teaching grants is intended to be such as to give a minimum to the schools that only provide partial instruction and a maximum to those that turn out finished workmen. How the scales proposed will work out in practice I cannot say: they must be regarded as tentative. If schools continue to be conducted on the present lines the grant will be much the same as it is now, but schools will naturally change their methods and how the grant will change I cannot predict. The best schools will certainly get a much higher grant than before, but that is only as it should be. I reckon that a good school should get Rs. 3 — 5,000 grant annually. The teaching grant is now about Rs. 30,000 per annum. I do not think it will rise much above Rs. 60,000 for sometime to come in consequence of the introduction of the new scale: even if it does we will get better value for money than we do now.

13. As will be observed, the idea is to give—

(i) Small staff grant plus small capitation grant for practice stage

(ii) Larger staff grant plus larger capitation grant for workshop stage

plus also an extra deferred capitation grant on practice stage, the intention being to encourage as far as possible the complete training of pupils. At present schools draw the bulk of their grant on behalf of pupils who leave after the first year or two and are therefore industrially valueless.

14. The scale of teaching grant proposed requires the approval of Government. The building and furniture grants are worked out on the same lines as those in the Department of Public Instruction.

15. As regards examinations I propose to break away entirely from the present system of Technical Examinations. These examinations I regard as useless—at least so far as my own subjects are concerned—principally for the reason that they convey no evidence whatever of practical training. These technical examinations may serve a useful purpose in other ways and I do not therefore press for their abolition. But so far as my department and my work are concerned I want something much more practical. My suggestion is to appoint an Examination Committee consisting of individuals connected with industry and to invite them to nominate examiners. The character of the examination is a technical matter that I need not here enlarge upon, but Government approval is required for the system of selection of examiners proposed by me.

16. Perhaps the most important part of the Code is the proposal for a normal training school. What lies at the root of most of our difficulties in connection with technical education is the fact that we have no qualified or competent teachers. The school authorities themselves are the first to recognise this need that if we are to do any good at all we must have a normal training school as soon as possible.

The system of stipends for teachers under training is the same as that adopted in the Department of Public Instruction.

The approval of Government for this proposal is also required. Definite proposals are submitted in another letter.

17. Otherwise the Code deals with purely technical details that do not appear to call for discussion or embodies principles that have already been approved in the Department of Public Instruction.

18. This Code must naturally be regarded as tentative and its provisions will not be enforced rigidly for a period of five years after adoption. During the transition period grants will be allotted on the present basis.

19. I have the honour to request early orders on the Code so that it may be circulated to schools and so enable them to make a start with reorganization.

Appendix A.

Recommendations of an Un-official Committee suggested in G.O. No. 833, *Educational, dated* 16*th July* 1914.

Resolved that the Committee approves in general of the scheme of industrial education as drafted by the Director of Industries.

2. This Committee strongly recommends that the Government of Madras arrange for the establishment at an early date of a Teachers' Training School at Madras in connection with the scheme of Industrial Education.

3. Resolved that the Committee further recommends that Central Industrial Schools be established at convenient centres, as a part of the scheme of Industrial Education to deal with local industries as set out in the resolutions of the Ootacamund Conference in September 1908.

4. Resolved that in the view of this Committee the present technical examinations do not serve as a satisfactory test of the capacity of a pupil in industrial subjects and that special examinations in such subjects, to be conducted by practical men, should be arranged for.

5. Resolved in view of the extreme importance of cost keeping in all classes of manufacturing industry, that provision be made for training in works accountancy.

6. As existing Government workshops offer excellent facilities for practical training the Committee suggests that these should be properly organised for industrial training without detriment to meeting the wants of existing departments of Government and that, wherever necessary, industrial schools for imparting instruction in the school stage be also provided in connection with them.

Appendix B.

Recommendations of the Committee appointed in G.O. No. 780, *Educational, dated* 4*th July* 1914, *to consider certain questions relating to improvements of Industrial and Technical Education in the north of the City of Madras.*

This Committee accepts the system of division (as suggested by the Director of Industries) of Technical Education into two classes of Technological and Industrial and approves of the Director's proposal to aim at the improvement of industrial education.

2. This Committee having heard the report of the Director upon his visit to the Victoria Technical Institute, Bombay, is of the opinion that for the present the arrangement he outlines for dealing with any demand for Technological education is adequate.

3. With regard to regular and complete courses of training as given in the Draft Code this Committee is unable to express any opinion upon the value of the "Mechanism" proposed but lays stress upon the final examination tests being of such a character that the results will testify to the suitability of those who pass them for industrial employment. The Government technical examinations have not, so far as they deal with trades, supplied such a test and it is considered essential that in the examinations it is proposed to introduce the examiners should be actively employed in the trade or profession in which they are examining.

4. The Committee is of opinion that the nomination of examiners should be entrusted to a Board of Representative employers, to be presided over by the Director of Industries.

5. The Committee is of the opinion that regular and complete courses of instruction do not entirely provide for industrial requirements and recommends that "Extension" courses should also be provided, in the Madras Trades School, for subjects such as Fitting and Turning, Blacksmith's Work, Foundry Work, Carpentry and Joinery, Plumbing and Sanitary Work, Brick Work and Masonry, Electric Wiring and Fitting, Motor Car Work and Motor Car Driving, Weaving and Dyeing, Metal Work and Metal Spinning

6. The Committee further recommends that facilities should be provided for such general education by means of evening classes as may be necessary for a pupil to take advantage of the Trade school course, it being a condition for admission to the classes however that pupils should be *bonafide* industrial workers or apprentices.

7. The committee considers the proposed Washermanpet site to be the most suitable centre for the teaching of Engineering Trade subjects, but it is of opinion that for general subjects another site would probably be more central and recommends that provision should be made in the Poonamalle High Road adjoining the Director's office for another branch of the Trade school.

8. The Committee considers a system of stipends to apprentices to be objectionable. It is however recognised that financial assistance may in some cases be necessary but instead of fixed stipends, it recommends the grant of scholarships to individual cases.

9. The Committee is not in favour of the provision of hostel accommodation in connection with this school.

10. It is considered essential that for teaching purposes every effort should be made to secure the partial services of individuals possessing practical experience of the subjects they teach, and is of opinion that provided suitable remuneration be given it will in most cases be possible to arrange for the part-time services of individuals actually practising the trade to be taught. The committee regards it desirable to fix the permanent staff of the trades school at the minimum possible limit. Except for the teaching of general literary and scientific subjects, it will in their opinion of unnecessary to employ any regular whole-time teachers.

11. The committee anticipates that a considerable time may elapse before a building scheme in connection with these proposals matures and it recommends that, if possible, work should be started in a rented building. There appears however some doubt as to whether a suitable building will be available near either of the sites proposed for these trade schools and the committee accordingly recommends that permanent arrangements should be made as expeditiously as possible.

Appendix C.

Note on the Victoria Technical Institute, Bombay.

Technical workers in any industry may be divided into two distinct classes: those who control operations and those who actually perform them. The character of the training required is different in the two cases and in the proposals I have prepared for the development of technical education in Madras, I have accordingly drawn a sharp line of demarcation in the higher, what I term "Technological" and lower, or "Industrial", types of education, these two types corresponding to the two classes of workers.

2. I have further made it clear that my proposals extend only to the provision of further facilities for industrial training and are purposely so formulated as to avoid any encroachment on the sphere of technology.

3. A part from other important differences between the two types of technical education one of the most clearly defined is that of educational qualification. To profit by a technological training a pupil must have a good general education: in the case of industrial training the amount of general education required is only moderate. In my proposals the highest standard of general education fixed for any subject is the third or fourth form and is in many cases lower. This is the maximum possible for an industrial school. For a technological school the Matriculation standard is the minimum qualification to be demanded.

4. The environment is also quite different in the two cases. In an industrial course (except in the preliminary period) the teaching is to be regarded merely as an adjunct to work under practical commercial conditions, that is to say, the pupil spends most of his time in practical environment. In a technological course the teaching element predominates and although the pupil may do a good deal of practical work he is essentially a student working in a more or less artificial and academic environment.

It follows as a corollary that a school providing an industrial course requires little equipment and little in the way of laboratory accommodation, whereas a technological institute must be fully equipped.

5. It has been suggested that the institute I propose to construct in Madras for the purpose of providing industrial instruction should be modelled on the lines of the Victoria Technical Institute. Bombay, and I have accordingly inspected this institute.

6. When it is explained that the general education qualification for admission to this institution is the Matriculation standard and that pupils undergo a regular whole-time course of instruction at the institute, and that the aim is to make the college a residential one, it will be apparent that quite apart from the actual character of the teaching, the general principles on which the institute is conducted are of a character according well with a technological but entirely unsuited to an industrial course of training. This fact has been clearly recognised and the Victoria Technical Institute does not claim to be anything but a technological institution. As such it falls outside the sphere of my proposals.

7. I may add that in the matter of classification of technical schools the Bombay Government and the Council of the Institute seem with certain changes in nomenclature, to have adopted an exactly similar system to that proposed by me and I believe that the fundamental distinction between what I have termed industrial and technological training is recognised there as clearly as I desire to make it here.

8. It may be accepted as a starting point for further discussion that a system of education similar to that provided at the Victoria Technical Institute cannot be introduced into my scheme, which has for its object merely the education of the artizan and working classes.

Ultimately perhaps the Director of Industries may be compelled to deal with higher technical education also, but at present the department is not organised in such a way as to permit of its taking up the question of technological training and it is also to me a mattér of some doubt as to whether the control of such training can be regarded as one of the proper functions of the department. If therefore technological facilities are regarded as necessary by the committee, they must, at any rate for the time being, be sought elsewhere.

9. There are three alternatives—

(1) To extend the Engineering College so as to provide training in technological subjects. This training will be of a University character.

(2) To build an institute similar to the Victoria Technical Institute to provide training in technical subjects. This training will be of a polytechnic character.

(3) To utilise the facilities now being provided in the Victoria Technical Institute.

10. I understand that proposals for a technological extension of the Engineering College are now under consideration. On the practical value of this scheme I am unable to give the committee any opinion as I know nothing about it. The second alternative I regard as quite out of the question. The equipment alone of an institute like the Victoria Technical Institute would cost somewhere near 10 lakhs and until it has been definitely proved that the demand for higher technical education is sufficiently great to keep an institute of this character going, I regard any experimentation as a gross waste of money.

11. The one and only objection to sending pupils to the Victoria Technical Institute is that the Madras Government is not officially connected with the institute and is therefore not in a position to work the institute into a general scheme of industrial education. This difficulty could easily be overcome by the Madras Government subscribing a certain amount annually to the institute and being represented on the council.

12. The advantages of such an arrangement are manifest. First on the score of expense it represents a large economy. If a technological institute were built in Madras most of the pupils would be drawn from the mofussil and would therefore have to maintain themselves away from home. The cost of boarding in Madras may be placed at a minimum of Rs. 12 per mensem. The cost of tuition and books will amount to Rs. 8, total Rs. 23. In Bombay the inclusive cost is Rs. 35, so that to make institutions in the two towns equally accessible from the Government financial point of view, Government would have to subscribe Rs. 15 per mensem towards the expenses of each boy proceeding to Bombay for training.

13. Assuming 12 admissions per annum, *i.e.*, 48 boys under training in a four years' course the extra expenses incurred in sending pupils to Bombay would be 48 × 12 × 15 or say Rs. 8,500 per annum.

14. Adding an annual contribution of say Rs. 30,000 towards the cost of the Victoria Technical Institute the total cost of training 48 pupils is under Rs. 40,000 per annum. To run an independent technological school will cost at least a lakh and, even if the contribution to the Victoria Technical Institute is increased ultimately to half a lakh, it will be much cheaper for Government to utilise the facilities thus offered than to start an independent institute until the admissions exceed about 60 annually.

15. A further advantage of the proposed arrangement is that the Victoria Technical Institute has now reached a point where pupils can be selected and the unsatisfactory ones eliminated. In a new institution this is not possible. On paper perhaps it may be done but in actual practice the management has to save its face and must keep up numbers at any price. The demand for higher technological training is not yet sufficiently developed in this Presidency to keep an institute filled with proper students and if an institute were started now in Madras, I am convinced that in view of the practical necessity for maintaining numbers the average value of the trained student would be very low indeed.

16. It seems to me also a desirable thing to get men away from their own surroundings. In this connection it may not be out of place to draw attention to two features of the Victoria Technical Institute which are not perhaps generally recognised. In the first place the institute is not a Government concern: it is controlled by an independent board on which Government are represented only because they subscribe towards the funds. Secondly the institute is not a local Bombay institute. Students are received from all over India, the Bombay men being indeed in the minority. The Madras Government can secure just as large a share in the control of the institute as the Bombay Government by subscribing an equal amount. Towards the maintenance of the institute the principal contributors are—

Ripon Memorial Committee.	The Bombay Government.
Sir J. J. 2nd Bart Memorial Fund.	The Bombay Millowners' Association.
The Bombay Municipality.	

17. As I have explained the Victoria Technical Institute now provides technological education for the whole of India and in my opinion it is, in the present state of industrial development, infinitely better for all local Governments to subscribe to the support of this one large institution rather than try and start small ones of their own.

18. My scheme is as follows: In the first place the Government of Madras should subscribe a sufficient amount towards the funds of the institute to secure a prescriptive right to a certain number of admissions annually. To begin with I think Rs. 25,000 is ample, no pupils from this Presidency being admitted except through the department in charge of technical education. For admission an annual examination will be held in one or more centres in the Madras Presidency, the examination being the ordinary entrance examination to the institute. These papers will then be examined and all pupils passing will be given a stipend of Rs. 15 per mensem, subject to such conditions as may be imposed. In addition there would be a certain number of scholarships of the value of Rs. 20 per mensem awarded to deserving and intelligent pupils, these scholarships, with the stipend, covering the whole of a pupil's expenses at the institute.

19. Under such an arrangement the courses of instruction in the institute and those provided under my industrial scheme would be co-ordinated, so that the institute training represented a direct extension of the industrial training in my schools and pupils qualifying under my scheme would be exempted from one or more years' training at the institute. In this way the institute would become an integral part of the Madras system of technical education until such time as the demand for technological training had proved itself sufficiently large to warrant the foundation of a local institution of the same character.

20. The following details regarding the courses of instruction at the Victoria Technical Institute may be of interest. Courses are provided in the following subjects:—Mechanical and Electrical Engineering, Weaving, Sanitary Engineering and Applied Chemistry. The courses extend over a period of four years. It was intended to try and increase this period to five: three years college and two years practical training, but the scheme fell through owing to lack of support on the part of employers of labour. No stipends are given and the fees per term (two in a year) are Rs. 25. The standard for the entrance examination is what may be termed a practical commonsense equivalent of the Matriculation standard. The Principal may at any time recommend the expulsion of any student who is not likely to profit by the training afforded. The minimum age for admission is 16 and every candidate must hold a certificate of physical fitness and sign a declaration that he is not liable to be forced to discontinue his studies owing to financial difficulties.

21. For the first year all the courses are more or less identical, specialising more and more as time goes on. Mathematics is dropped after the first year, Physics after the second. At present the working time is 36 hours a week of which 26 hours are devoted to practice. In the near future the time is to be extended and practical work will amount to nearer 75 per cent. of the total time.

22. To obtain a certificate pupils must do at least 75 per cent. of the prescribed work and must satisfy their professors, regarding their general ability. They must also put in a period of practical training outside and complete this to the satisfaction of their employers.

23. The institute is shortly removing to more commodious premises to be erected and equipped at a cost of 13½ lakhs. This new building will provide hostel accommodation for 350 pupils with room for a further block.

III

Letter—from K. T. B. Tressler, Esq., Director of Industries.
To—the Secretary to Government, Educational Department.
Dated—Madras, the 26th February 1915.
No.—E. 41.

I have the honour to submit herewith the proceedings of the un-official committee convened to consider the proposals embodied in the draft code.

The committee approves generally the principles embodied in the Director of Industries' scheme but wishes to point out that the main difficulty hitherto connected with Industrial Education has been the lack of qualified teachers. This difficulty will continue so long as no facilities are provided for training teachers and the committee feels very strongly that in any scheme for the development of Industrial Education the very first step to be taken is the establishment of a normal training school at Madras.

The committee understands that the development of certain schools in up-country centres is contemplated by Government and would request that early steps be taken to give effect to this proposal. They consider that schools of this kind would give a valuable impetus to local industries. One member of the committee wishes to express the opinion that more should be done to investigate and develop industries.

The committee as a body also considers that much greater attention should be given to works accounting and that if possible special arrangements should be made for the teaching of the subject.

The committee also thinks that the Government workshops constitute a valuable training ground for apprentices that has not yet been exploited and submits for careful consideration the desirability of developing these workshops with a view to their becoming of educational value.

Enclosures.

(i)

Proceedings of a Committee of School Managers, held on Tuesday, Wednesday and Friday, 8th, 9th and 11th September.

The committee consisted of—

President.

Mr. K. T. B. Tressler.

Secretary.

Dr. F. Marsden.

Members.

The Hon'ble Rao Bahadur Ramachandra Rao Garu.
The Hon'ble Mr. V. S. Srinivasa Sastriyar.
" " Nawab Saiyid Muhammad Bahadur.
Rev. Father J. Perrin.
M. S. D. Bawden.
Rev. C. G. Stapley.
Rev. G. N. Thomssen.
Mr. Khaja Khan Sahib Bahadur.

The Chairman described the origin of the committee and invited the views of the members upon the draft code (which had been circulated) and their assistance in revising and developing the proposed scheme.

Mr. Ramachandra Rao enquired whether this was the committee which had been promised by Government in reply to an interpellation of his in the Legislative Council, and if not whether there was any intention of a further committee being appointed. He also referred to the Proceedings of the Ootacamund Conference in 1908 and enquired whether there was any intention of starting schools of the type then recommended.

The Chairman replied that this was not the committee appointed directly by Government after the Honourable Member's interpellation; that committee would meet on the 10th and 12th of September. This committee was formed under another Government order and it was suggested that the two should work together. There was no idea of appointing any further committee.

As regards the 1908 conference, the school which was there formulated was of the higher technological type and it was not his idea to deal with that type at present but to restrict the proposals to the lower industrial type for the training of workmen and foremen.

Mr. G. N. Thomssen suggested that it would be of advantage if well equipped Central Government schools could be arranged for in selected centres. These could serve as models for the schools in the surrounding districts and the Superintendent could go round supervising and inspecting. His attention was drawn to the present lack of suitable teachers and the necessity of some such scheme, as the one proposed, to meet this want was felt.

The Chairman then mentioned certain proposals which had been made with the object of improving the equipment and standard of teaching in carpentry, blacksmithy work, etc., in certain well-situated existing schools.

Mr. Ramachandra Rao wanted a number of such schools to be provided to stimulate and assist local industries; the difficulty of finding really qualified teachers was then emphasised and Mr. Bawden was of the opinion that little could be done until this was remedied, as without methodical training it was hopeless to think of raising the standard of the workman. It was due to this lack of methodical training, he thought, that the ordinary Indian workman was so deficient in the creative faculty, and possessed little or no initiative or capacity for thinking. He himself had found that, if he wanted anything at all out of the way, it was essential to undertake the training of the necessary work people himself. He thought the scheme of training outlined in Mr. Tressler's note would tend to improve the quality of the workman all round.

In a discussion dealing with the class of work to be done in the proposed practice stage, the Chairman emphasised that this was to be confined to manual training, to develop the skill which was essential for a competent workman. There was no objection to the sale of any articles produced under these conditions, so long as the idea of training remained paramount and the accounts were kept absolutely separate from those of the subsequent "workshop" stage. Other members of the committee also spoke of the value of a good system of account keeping and attention was drawn to the general inability in India to keep accounts relating to manufacturing processes.

Mr. Srinivasa Sastriyar drew attention to the paragraph dealing with the question of Superintendents in the Grant-in-Aid Code and asked why it was that European shop training was specified and whether it was necessary to exclude Indians by such a clause. Both the Chairman and Mr. Bawden explained the position, pointing out the differences which existed in the staffing of any workshop in England or Amercia and the best workshops in India. The former were filled with skilled men and the latter with unskilled, with the result that the methods followed were very different and if pupils were to receive anything like a sound training it must be through men who had themselves undergone a proper training. Of the two stages of training, that in the workshop stage was really much more important than that in the preliminary practice stage.

Mr. Ramachandra Rao enquired whether the training of Superintendents could not be undertaken in Government workshops and the Chairman thought it could if these workshops were placed under his control.

Mr. Srinivasa Sastriyar thought that the effect of the scale of grants proposed in the draft code would be to restrict the employment of highly paid teachers, but it was pointed out that this was not the case if the schools embraced both the school and workshop stages, for the more effective the teaching the greater would be the return in the later peroids of training.

Mr. Ramachandra Rao enquired whether factory schools were required to show a profit on the working to qualify for a grant and mentioned how the aluminium factory had at first worked at a loss in spite of efficient management. It was pointed out that the case of the aluminium factory was not comparable, as it dealt with a material for which a market had to

be created, whereas the schools would be interested in things for which the demand already existed. The Chairman stated that although it was not absolutely necessary that schools should work at a profit to qualify for grants, it was imperative from the point of view of the training that in the workshop stage they should show evidence of a sound commercial system.

Mr. Ramachandra Rao objected to the clause under which the recognition of a school might be withdrawn because of the introduction of a *primâ facie* non-industrial pupil, but the Chairman insisted that the clause was necessary to prevent the waste which would follow from industrial schools admitting and training pupils who had no intention of following industrial pursuits but took the course with some other object in view.

Discussing the question of the amount of general education to be acquired by industrial pupils, Mr. Stapley enquired whether it would be necessary to have a separate staff, distinct from that of the ordinary school. He did not think an abridged course could be worked without it, for the Director of Public Instruction objected to the admission of half-time pupils. He saw further difficulties with respect to the variety in the educational attainments of industrial pupils of different years and thought separate teachers for these might be required. He did not think it advisable to insist on too high a standard, for his experience had been that pupils who had passed only the fourth standard took kindly to manual labour, but there was a danger that if a higher standard than this were insisted upon, the pupils would not look forward to an industrial career but would try to get other work. He thought that for a journeyman workman the fourth standard and for a foreman seventh standard should be the aim.

Mr. Ramachandra Rao enquired whether the ordinary school curriculum of general education could not be followed and wished to know what the course of general education was for industrial pupils in western countries.

Mr. Bawden said that the full curriculum in the ordinary schools was not necessary for industrial pupils here and informed Mr. Rao that in America there was no difference in the general education of different classes. After taking the same course of elementary education one pupil might become a workman whilst another would go on to study for a profession. In members of the same family one would find a wide variety of occupation and some of the best known scientific men in America had at some time earned their living by manual labour. In fact there was no dividing line between the professional man and the industrialist.

Mr. Khaja Khan Sahib Bahadur thought that reading, writing, English and arithmetic should be taught to industrial pupils and that provision similar to that in the Anjuman school, Madras, could be made.

The Chairman said he was not interested so much in the amount of education possessed by the pupil on entering the industrial school, but he thought it imperative that he should have reached a reasonable standard by the time he had completed his course, and in the case of a workman undergoing higher training, he would insist upon him getting further education by attendance at night schools.

The difficulty which might be expected in keeping the ordinary type of pupil at school until the completion of a definite course was mentioned and it was pointed out that there were no means of enforcing the fulfilment of any bond, or guarantees, which might be demanded.

In the discussion on the length of period of training Mr. G. N. Thomssen spoke of the difficulty experienced in the districts in keeping pupils in attendance throughout the year and especially during harvest.

With regard to the qualification of teachers it was suggested that selection might be made from the foreman's class and further training given, but it would be necessary to have some means of giving a suitable training and the general idea was that a central training school in Madras would be the best means of meeting the need.

A long discussion occurred with regard to the relative functions of Superintendents and Managers and the Chairman made it clear that managers were responsible for the general control of the schools but were not entitled to interfere in the question of practical training of the students, which was the province of the Superintendents.

Regarding the elimination of undesirable pupils it was not considered advisable to frame any universal scheme and the discussion drifted towards the question of the difficulty which was generally experienced in a school in getting pupils. It was stated however that as a school progressed and its value became better known this difficulty tended to disappear. It was evident from the discussion that many pupils upon whom time and money had been spent in training drifted away to non-industrial pursuits. Further, that schools varied in the treatment of their pupils; some were able to get pupils and maintain them at a minimum of cost, whilst in other the rates of stipends and the accommodation were somewhat extravagant.

The Chairman explained that his idea was to bring managers to recognise some uniform scale of stipends and to make this as low as possible. In the early stages of a school it would probably be necessary to be generous and he was prepared to recognise this and make allowance for it in the scale but if a school were efficiently managed it would soon be possible to reduce the rate to the normal level. The committee thought that, especially during the transition period, such action would be advisable.

In the discussion on grants, attention was drawn to the fact that Government had not followed the recommendation of the Ootacamund Conference to spend some 4½ lakhs per annum on industrial education. Asked to explain the system of grants proposed, the Chairman remarked that in the school stage grants would be low, as the expenditure during this period need not be great; in the workshop stage the capitation grant was very much increased, as the cost of training was greater and it was desirable to get as many pupils as possible to go through the complete course.

The question of manual training in ordinary schools was raised and it was felt that although it was a useful subject of instruction the line of demarcation between it and industrial education should be clearly defined and the Chairman remarked that he certainly did not want the work of industrial schools to be interfered with by the introduction of a large number of manual training, non-industrial pupils.

In dealing with the question of subjects suitable for instruction and examinations, the committee requested further information as to the kind of test which it was proposed to substitute for the present Government Technical examinations. These were felt to be unsuitable and the scheme outlined by the Director of Industries was considered an improvement, if it were feasible. The Chairman explained that he did not expect to meet with any difficulty in having the tests carried out in workshops or in getting practical men to undertake the duties of examiners. He did not wish at present however to abolish the Technical examinations, as there still might be candidates desirous of taking the examinations for the sake of the certificates.

Mr. Bawden and Mr. Ramachandra Rao asked for information as to the teaching of agriculture in the schools and wished to know whether it would be possible to arrange for the purchase of land to serve the purpose of teaching. The Chairman thought so, and that if this were done, small plots might be allocated to individual pupils that they might be taught practically how to work at a profit.

There was a general expression of opinion that for the Mechanical trades the Government Workshops might with advantage be used as a training ground for industrial workers. Mr. Bawden did not see how this would be feasible, but said that one of the greatest drawbacks at present was the absence in India of commercially worked factories and workshops to which apprentices and industrial students could find ready admission.

The Chairman said he would be prepared to take over the Government Workshops and work them at a profit besides making them available as an assistance in improving the industrial education in the Presidency. He did not think they were working on commercial lines at present.

Mr. Ramachandra Rao wished to pass a resolution calling upon Government to initiate experimental work in connection with industries. He thought that more should be done in the way of investigating the prospects of new, and development of existing industries.

Mr. Srinivasa Sastri and other members thought such a resolution unnecessary and the Chairman pointed out that the Department of Industries existed for the purposes mentioned and had already done something on the lines suggested. He would refer to the matter in his report.

After some discussion a slight alteration was made on the initiative of Mr. Srinivsa Sastri, in the paragraph in the draft code dealing with the employment of teachers and it was also thought advisable to introduce a clause under which the services of teachers and superintendents who had been employed for a long term of years would not under the new system be dispensed with. It was felt that no injustice would be done if inefficient men were replaced by well qualified ones, but no definite decision was come to as to the procedure to be followed. The Chairman said he would circulate a note showing how the proposed changes affected the staff of the schools under his control.

Mr. Srinivasa Sastri and Mr. Ramachandra Rao were in favour of a permanent advisory committee being formed, but Mr. Bawden did not think it would work and that it was beyond the province of this committee to suggest it to Government. The Chairman said he would refer to the matter in his report, but did not think Government would be in favour of such an

idea. He would be very glad to discuss questions in a friendly way with individuals whose advice might be of value, but he did not approve of a permanent advisory committee on the lines of the one suggested for general education. Any attempt to officialise discussion of this kind would, in his opinion, defeat the end in view and any committee appointed would tend to become a dead letter.

Mr. Srinivasa Sastri thought it desirable that all schools should be thrown open to all classes of pupils. The Chairman said he would deal with the suggestion in his report.

The committee then passed the following resolutions :--

(1) Resolved that the committee approve in general of the scheme of industrial education as drafted by the Director of Industries.

(2) This committee strongly recommends that the Government of Madras arrange for the establishment at an early date of a Teachers' training school at Madras in connection with the scheme of industrial education.

(3) Resolved that the committee further recommends that Central industrial schools be established at convenient centres, as a part of the scheme of industrial education, to deal with local industries as set out in the resolutions of the Ootacamund Conference in September 1908.

(4) Resolved that in the view of this committee the present technical examinations do not serve as a satisfactory test of the capacity of a pupil in industrial subjects and that special examinations in such subjects, to be conducted by practical men, should be arranged for.

(5) Resolved in view of the extreme importance of cost keeping in all classes of manufacturing industry, that provision be made for training in works accountancy.

(6) As existing Government Workshops offer excellent facilities for practical training the committee suggests that these should be properly organised for industrial training without detriment to meeting the wants of existing departments of Government and that, wherever necessary, industrial schools for imparting instruction in the school stage be also provided in connection with them.

(ii)

Proceedings of the committee of school managers representing lace-making etc., held on 15th September 1914.

Present.

President.

Mr. K. T. B. Tressler.

Secretary.

Dr. F. Marsden.

Members.

Mrs. Firth. | Miss Grove.
Miss I. Forbes. | Miss A. M. Cassie.

The Chairman (in his opening speech) gave a resume of the meetings held during the previous week and explained the proposals which he had put forward.

Mrs. Firth showed the committee some samples of lace-work done by her pupils and explained that the work did not in any way interfere with that of the Friend-in-need workshops or of other industrial institutions. She imparted only elementary general education to her pupils, as their object was to earn their livelihood by becoming nurses, with a knowledge of lace-making. Her pupils worked for not less than 16 hours a week. She showed samples of hand worked garments which although requiring much detail work, and therefore somewhat costly, had met with a ready sale in England.

Miss Grove expressed the difficulty in making gosha Muhammadan women attend school. They had to be taken to school in a bandy and the charges in connection with this had to be met from the school funds. She had a workshop attached to her school.

Miss Cassie said that her pupils were taught lace-making for two hours a day and drawing for two hours a week. She desired to be enlightened with regard to the fixing of grants.

The Chairman expressed his difficulty in dealing with schools teaching for two hours and three hours a week and explained his proposal to draw a sharp line of demarcation between manual training and industrial work. He further explained (1) his proposal regarding half-timers and full-timers, (2) the school section and the factory section, comparing lace schools with the carpentry schools, and (3) the method of assessing grants. He observed that the

articles made in lace-schools were not priced on a commercial basis, *i.e.*, with reference to the cost of raw material and the time taken up in the manufacture, and that they were not made in sufficiently large quantities. He pointed out the desirability of making such articles as would find a ready sale instead of wasting time in the manufacture of articles for which there was little or no demand.

Miss Forbes thought that the schools which made too much profit would get correspondingly less grant.

Dr. Marsden pointed out that the fact that the school made too much profit was a sign of its efficient working and it might be that such a school would get more grant.

It was resolved to include in the syllabus the following subjects :—

Needle-work and Dress-making.	Lace-making and fancy needle-work.
White and coloured embroidery.	Domestic Economy.

The Chairman thought it would be advisable at present only to give evening lectures in domestic economy in lace-schools.

The members of the sub-committee for framing syllabuses were nominated.

Dr. Marsden read the resolutions passed by the other committee and they met with the approval of this committee.

The committee then dispersed.

Order—No. 164, Home (Education), dated 13th February 1917.

Recorded.

(True Extract.)

E. A. Harvey,
Acting Secretary to Government.

To the Officer in charge of the Department of Industries.

G.O. No. 164, 13th February 1917

Code of regulations for industrial schools

Recording papers relating to the proposal to publish a separate — in the Presidency.

NOTES CONNECTED WITH G.O. No. 164, HOME (EDUCATION), DATED 13th FEBRUARY 1917.

[SUBJECT.—*Code of Regulations for Industrial Schools.*]

From the Director of Industries, dated 26th February 1915, *No. E.* 44 (*three letters*).

About the beginning of the year 1912, Mr. Tressler submitted a note dealing with the general policy to be pursued in regard to recognition and aid and other matters connected with industrial and technical schools. The Government passed no orders on it till the year 1914 pending the final orders of the Secretary of State on the question of the reconstitution of the department which had been then under consideration. Orders sanctioning the reorganization of the department were issued in March 1914; and the Government in G.O. No. 833, Educational, dated the 16th July 1914, directed Mr. Tressler to refer his note on industrial schools to a committee of school managers, and also to one of representative employers of labour, which was constituted in G.O. No. 780, Educational, dated the 4th July 1914, to work out details in connection with the North Madras Technical Institute. Mr. Tressler was also asked to submit a draft Code for industrial schools. He now submits the Code as well as copies of the proceedings of the committees and their resolutions. These are mainly dealt with in the second of Mr. Tressler's letters ~~in the current file~~. His other letters relating to Madras Trades Schools (item 3 in paragraph 12 of the first letter ~~in the current file~~), Endowment of the Victoria Jubilee Technical Institute [item 5 (*a*)], and Normal Training School [item 5 (*b*)] are dealt with separately, the present file confining itself only to the Code. The communications regarding Waltair, Tindivanam and Coimbatore schools (items 6 to 8) have not yet been received from the Director.

Page 2 of G.O. 833, Educational, 16th July 1914.

Page 8 of notes to G.O. *ibid.*

G.O. 892, Revenue, 21st March 1914.

read above

P.R.—4-7-15.

2. As regards the draft Code, the committees in general approve of it and Mr. Tressler has embodied in it as far as possible the suggestions of the committees. The Code itself consists of two volumes, the first containing the rules and appendices, the second detailed syllabuses relating to each subject. The rules in the first volume are arranged in three parts as follows:—

P.R.—4-7-15.

PART I.—General scheme of education.
PART II.—Conditions for State aid to private institutions.
PART III.—Examinations, certificates and courses.

3. The main features of the scheme of industrial education as laid down in the draft Code are briefly described below:—

Technical education is defined as [illegible] particular type of special education which has for its object the training of industrially efficient workers. This education is divided into two kinds according to the class of industrial workmen who are trained.

Paragraph 1, page 1 of the Code.

The education given to those who *direct* the work, where theory is of paramount importance, is called "technological" education and that given to those who *actually perform* the work, where theory is subordinated to practice, is called "industrial" education. Under the former head, again, there are two types—higher and lower—called respectively the "university" and "polytechnic." The "university" type of education qualifies a man for the highest position in industry and is expected to be provided in this Presidency by the Engineering College when it is developed, the Department of Industries not concerning itself at present with it. Under the other type, viz., "polytechnic," the general education is lower and the man turned out is qualified only for lower administrative positions. It is not proposed at present to establish any polytechnic institute in this Presidency except in regard to two subjects, dyeing and leather trade, and for the other subjects under this system it is proposed to grant stipends to certain selected pupils to proceed to Bombay and undergo a course of instruction in the Victoria Technical Institute.

Paragraphs 3 and 4, pages 1 and 2 of the Code.

Paragraph 6, page 2 of the Code.

Paragraph 12, page 3 of the Code.

Paragraph 11, page 3 of the Code.

Paragraph 13, page 3 of the Code.

The other kind of technical education, which is called "*industrial*," is the one to which the Department of Industries is to devote its attention *for the present*. Under this head, there are two kinds of training, one in which the practical side of the trade alone is taught and the other where to this training some theoretical knowledge dealing with general principles is added and accordingly demands of the candidate some higher general education. The Code designates these two kinds of training as the "journeyman's" and "craftsman's" courses respectively, and the products are intended to be qualified as artisans and foremen respectively. The classification of the various types above referred to is shown in one view in the following statement:—

Paragraph 11, page 3 of the Code.

This is the policy which underlies the whole Code.

P.R.—4-7-15.

Paragraph 22, page 6 of the Code.

Technical education.

Technological (managers)		Industrial (workmen)	
University (higher class)	Polytechnic (lower class)	Master craftsman (foremen)	Journeyman (artizans)

Rightly so—in accordance with the policy of the department.

P.R.—4-7-15.

4. The Code deals mainly with the second or industrial side in the above table. It prescribes how these workmen should be trained. Both the classes above have in common practical training, which fall under two stages—the "practice" stage and the "workshop" stage, the latter of which is intended to give training on commercial lines, and in addition the craftsman receives instruction in the theory of the trade also. The general educational qualifications prescribed for admission to the journeyman's and craftsman's courses are the fourth standard and the fourth form, respectively, and where the candidates have not previously acquired these qualifications, they can acquire it in the industrial school itself while undergoing the practical training. The Code recognizes two systems—one, the school system and the other, the apprentice system. While under the former, regular practical training is provided in the

Paragraph 25, page 8 of the Code.

Paragraph 27, page 8 of the Code.

Paragraph 24, page 8 of the Code.

Paragraph 23, page 8 of the Code.

Paragraphs 28 and 29, pages 8 and 9 of the Code.

school itself, under the latter (apprentice system) training under an employer is taken as a substitute for it. Under the school system the total period of practical training is generally five years (two years in the practice stage and three years in the workshop stage) for both the journeyman's and craftsman's courses, and in the case of the latter an additional two years for theoretical training is prescribed. Under the apprentice system, which is mainly intended for the craftsman's course only, a workshop training under an employer for four years is laid down, exclusive of the two years' theoretical course. After two years of practice stage, an industrial school leaving certificate is granted, which will secure the candidate admission to the workshop stage and at the end of three years' training therein a journeyman's certificate is granted and after two years' further theoretical course a craftsman's certificate is given.

Schedule on pages 40 and 41 of the Code.

Pages 40 and 41 of the Code.

Paragraph 1, page 32 of the Code.

Chapter I of Part III generally.

* In the "Practice" stage.

Provision is made for half * timers also, a longer period of training being prescribed in their case.

Paragraphs 44 and 45, pages 20 and 21 of the Code.

5. The Code divides industrial schools into two classes according as they are managed by the Government or by private bodies. The general rules in regard to recognition, organization and other matters are almost similar to those of ordinary schools. The Code also lays down rules in regard to strength and qualifications of the staff.

Paragraph 35, page 11 of the Code.

Chapter II of Part II, pages 15 to 19 of the Code.

Paragraphs 41, 60 and 61 of Part II, pages 20 and 24 of the Code.

As regards grants-in-aid, these are the same as those for ordinary schools in the case of building and furniture grants. In the case of teaching grants, however, a completely new system has been proposed, based on cost of staff and on the number of recognized pupils under training, the rates varying according to the stages of instruction and the number of subjects taught.

Pages 29 to 31 of the Code.

Page 27 of the Code.

Chapter I of Part III, page 32 of the Code.

As regards examinations, it is proposed to break away completely from the present Government Technical Examinations. Examinations are to be held at the end of the practice, workshop and craftsman's courses and certificates granted. The first of these will be held by the school authorities. The other two will be held by a body of examiners nominated by an examination committee and approved by the Government.

All for good.
P.R.—4-7-15.

Chapter II of Part III, page 34 of the Code.

The Code provides for the payment of scholarships on the results of annual examinations in the several stages of the course.

Chapter IV of Part III, page 42 of the Code.

Besides the regular and complete courses of training described above, the Code also provides for other kinds of special classes where instruction in theory or practice of varying nature will be imparted to such artizans or other people who cannot avail themselves of the advantages offered by the regular course. These special classes are of five kinds—

(1) Popular lectures.
(2) Trade instruction classes
(3) Extension classes
(4) High Proficiency classes.
(5) Theoretical classes.

Chapter V of Part III, page 44 of the Code.

Lastly, the Code lays down regulations for the normal training of industrial instructors. These are to receive stipends as are allowed to ordinary teachers undergoing training.

6. It will be seen from the above that the proposals made in the draft Code are mainly developments of the scheme outlined in Mr. Tressler's original note of 1912. Broadly speaking the scheme laid down in the Code does not seem to be open to any serious objection and it has had the approval of a large body of technical men.

Pages 2 to 20 of G.O. 833, Educational, 16th July 1914.

I quite agree.

P.R.—4-7-15.

7. As regards the Code itself, it is submitted that it is intended to cover, so far as industrial schools are concerned, the grounds covered by the Madras Educational Rules and the Grant-in-aid Code as regards ordinary educational institutions. The former contains all the regulations for the organization, working and recognition of schools; while the latter lays down the nature and conditions of aid to be given to the various kinds of schools and colleges. Both these are combined in the draft Code for Industrial Schools. Parts I and III of this are special to industrial education—the former gives only the definition and classification of such education, and the latter rules relating to examinations, scholarships, etc. Part II contains provisions similar to those in the Educational Rules and the Grant-in-Aid Code.

I see no harm in it.

P.R.—4-7-15.

E.g., paragraph 10, page 3, paragragh 28, pages 8 and 9, paragraph 33, page 10 of the Code.

The whole thing is tentative; and the department has to carry the public with it; some prolixity is not harmful just now.

P.R.—4-7-15.

It is respectfully submitted that Part I seems unnecessarily elaborate and contains matters which do not ordinarily find place in any Code. It is replete with much of disquisitional matter and specification of the obligations of Government which would be more fit for a "report" than a Code. The functions of a Code are generally to lay down rules and regulations for the organisation and working of institutions; the reasons which lead to the framing of such rules should not find a place in it. Further in this part some references to schemes which have not yet been considered by the Government are made, e.g., the permanent institution of scholarships at the Victoria Technical Institute, Bombay, and the acquisition of interest in that institute by the Government, the development of the Engineering College into a Technological Institute, the monopoly of the Government to establish training schools, etc. These will have to be expunged from the Code. These matters will be further referred to below when dealing with the individual paragraphs of the Code.

Paragraph 13, page 3 of the Code.

Paragraph 12, page 3 of the Code.

Last sentence of paragraph 10, page 3 of the Code.

I am by no means certain that all these things should be expunged.

P.R.—4-7-15.

Though *Part II* is not open to such criticism, the arrangement of the matter therein leaves much to be desired; questions relating to recognition and grant and to disciplinary regulations are largely mixed up. These will also be pointed out in detail below.

P.R.—4-7-15.

Part III is, however, generally acceptable.

The various paragraphs in the Code will now be dealt with separately *.

* Printed as annexure.

S.K.—15-6-15.
C.R.—20-6-15.

Extract from His Excellency's Note on the files relating to the Department of Industries.

* * * * *

6. In regard to the Code, I should first like to know the extent of the field which it will regulate; how many schools, teachers and pupils will at present come under this Code? I ask this because I greatly doubt whether there is a sufficient body of accepted theory and practice in industrial education to justify our committing ourselves at present to so comprehensive and elaborated a system. We should, I agree, work up to something of the kind, but experience during the intervening period may substantially modify present opinions as well as future requirements. Also a Code, as I understand it, should simply be a body of regulations. I would omit so far as possible from it everything in the nature of a declaration of policy or a manifesto on the subject; all this might, I suggest, conveniently find place in a separate explanatory memorandum. Also there should be omitted, as I have already observed in the administration report of this department, every reference to Mr. Tressler's proposals which has not yet received the approval of Government. As an illustration of this I may mention the references to the Victoria Technical Institute, Bombay. If I remember aright, there are other instances. It would be perfectly possible thus for Mr. Tressler to remove from the Code all explanatory and descriptive matter and reduce it considerably in size.

7. There are several points of detail which require, I think, further consideration, such as whether or not fees are to be paid in industrial schools. This and possibly others are based upon the recommendations of the committee; but I think it is of sufficient importance, and there may be others of the same kind, to deserve further consideration than it has received. Such points should be further noted upon.

8. In regard to teaching grants, so far as I can see, though I have not been able to examine the matter as closely perhaps as it should be examined, there is no reference to the share of expenses to be provided by the manager. Does it follow that with the 3/10ths salary grant and the capitation grant any particular institution will be able to pay its way? Have the scales proposed been worked out with the budget figures of existing schools? If grants are to effect the maximum amount of good, they should be as far as possible permanently fixed from year to year so that schools may rely upon them; and here again I doubt whether we are ripe for a rigid system and whether it would not be better to call for a budget from each school and within limits laid down assess grant according to its requirements.

9. Again, in regard to building grants, these paragraphs are taken, I assume, mostly from the existing Grant-in-Aid Code and based on some experience. I am not convinced that it is desirable, except where absolutely necessary, to depart from those existing provisions which after all are based upon experience. Even as a matter of convenience there is a strong case for the building and furniture grant provisions being identical in the two Codes. Indeed there is something to be said for this Code merely stating that the provisions of the Grant-in-Aid Code will be applied, and printing them as an appendix for convenience of reference.

10. When the information for which I have asked above is forthcoming, I shall be prepared to discuss with you or with Mr. Tressler any of these points before passing final orders upon them.

P[ENTLAND]—24-9-15.

A The number of schools under the control of the Director is 40 and their strength on the 31st March 1915 was 1,876. The number of teachers in those schools is not known. Information in this regard has been called for in connection with the proposal to establish a normal training school.

B The notes already submitted by the office on the Code follow the lines laid down by His Excellency. The notes have been further scrutinized and, wherever necessary, additional notes have been added under each paragraph.

C Specific questions regarding fees and other matters have also been dealt with in the respective places in the notes.

D With reference to the verbal orders of the Secretary that the system of teaching grants should be as elastic as possible, notes have been added in this regard under paragraphs 73–76 of Part II. It is proposed therein that grants should be fixed by the Director in each case with reference to the circumstances of the school and after scrutiny of the budget estimates for the year subject to the limitation of half the net cost.

E The rules of the ordinary Grant-in-Aid Code in regard to building grants have been adopted in the draft Code without any material alteration. They have been incorporated in the body of the Code itself as in a few respects slight modifications are necessary to adopt them for industrial schools. In general outline and in most of the details the rules are the same. For the reasons stated above, it may be better to bring them in the body of the Code than as an appendix.

The reply to the reference made to the Director of Public Instruction in regard to general education in industrial schools having since been received, the notes relating thereto have been added along with those under paragraph 24 of Part I and further notes added.

S.K.—10–10–15.

C.R.—11–10–15.

On 5th November 1915 His Excellency the Governor approved of the despatch to the Director of Industries u.o. for acceptance or criticism of a revised draft of volume I of the Code drawn up on the above lines.

C. G. TODHUNTER—5–11–15.

U.O. Note to the Director of Industries.

On the result of a further examination of the draft Code of Regulations for Technical Education, Government are disposed to doubt whether there is a sufficient body of accepted theory or practice in industrial education to justify their committing themselves to so comprehensive and elaborate a system. They therefore desire that the Code should be reduced for the present to what is essential for present necessities, to be elaborated later as experience dictates. To this end they wish to have removed from it the following matter :—

(1) Everything of the nature of a declaration of policy as distinguished from the regulations which are proper to a Code.

(2) Every reference to proposals which have not yet received the approval of Government.

(3) All explanatory or descriptive matter that is not essential to an understanding of the context.

Where the Code follows the Grant-in-Aid Code or the Madras Educational Rules it is desirable that it should do so, so far as possible, verbatim. The rules contained in these publications have stood the test of experience or have been modified as experience showed necessity. Further modifications are not improbable and recognized interpretations have grown up. It is undesirable that there should be two parallel Government Codes with slight differences in wording. Some other matter which is not essential to the Code, e.g., the reference to special courses, may for the present be left for separate treatment.

In some minor matters it seems doubtful whether it is at present wise to adopt the scheme set forth in the Code in its entirety. Instances are the proposals relating to half-timers and the High Proficiency examination. It seems desirable to omit these for the present, meanwhile giving the Director what latitude is possible.

A revised draft of the first part of the Code prepared in accordance with these orders is herewith forwarded to the Director who is requested to examine it at his very early convenience and to return it with his remarks. Thereafter he is requested to suggest such changes as may be necessary in the forms in volume I and in volume II of the Code.

C.G.T.—5–11–15.

NOTES TO G.O. No. 164, HOME (EDUCATION), 13TH FEBRUARY 1917

OFFICE OF THE DIRECTOR OF INDUSTRIES.

The amended Code returned herewith together with—

(*a*) notes by Government,

(*b*) re-amended Code (as re-amended by me),

(*c*) notes by me on my re-amendations.

K. T. B. TRESSLER—17-4-16.

EDUCATIONAL DEPARTMENT.

Please see His Excellency the Governor's note on pages 5 ~~and 6~~ supra. A revised draft of the Technical Education Code was prepared in accordance with His Excellency's instructions and was forwarded to the Director of Industries for remarks. The Director does not see his way to accept the revised draft. On the other hand he has prepared a slightly amended draft of his original Code embodying a few of the minor alterations suggested by the Government. But there are still several important points on which he has departed from the principles laid down by the Government. The following are some of these :—

(1) In chapter 1 of Part I of the Code all explanatory and descriptive matter was omitted but the Director proposes to retain some of it still.

(2) In chapter 2 of Part I the rules relating to the Bombay Victoria Technical Institute scholarship scheme were collected separately and added to the end of the chapter. The Director has again, however, mixed up those rules with the rules for the technological courses in dyeing and leather trade provided for in this Presidency.

(3) Chapter 4 of Part I which deals with the classification of trade and industrial schools was omitted as such classification was considered to be unnecessary at present. Mr. Tressler, however, states that the chapter is necessary and must be retained.

(4) In Part II a re-arrangement of chapters was made so as to bring all rules relating to grants together and to group separately chapters containing general rules regarding organization, etc., of the nature of those found in the Madras Educational Rules. Mr. Tressler finds himself absolutely unable to agree to this re-arrangement.

(5) It was proposed to leave out for the present all references to half-time courses, special classes, normal training and the new scheme of scholarships. Mr. Tressler desires to retain all these from the outset. It has been decided that his scheme of normal training cannot be adopted now—please see G.O. No. 234, Educational, dated the 3rd March 1916. His scheme of scholarships is entirely different from what is followed at present. It has not yet been considered and sanctioned by the Government. It was therefore proposed to deal with it separately.

(6) As regards building and furniture grants Mr. Tressler in his original draft embodied the rules in the Grant-in-Aid Code without carrying out the recent amendments that had been made in that code by the Government. In the revised draft of the code prepared by the Government all these amendments were embodied. In the amended draft now forwarded by him Mr. Tressler sticks to his original rules without the alterations.

2. Mr. Tressler states that he is unable to accept all the changes and alterations proposed by the Government and that if such alterations should still be made it should be done by the Government irrespective of the views of their technical adviser. In these circumstances orders are solicited whether each section of the modified code submitted by Mr. Tressler should be examined in detail. We have now three drafts of the code—Mr. Tressler's original one, the one suggested by the Government, and Mr. Tressler's revised one. Mr. Tressler mostly sticks to his guns and is unwilling to enter into further discussion about the various questions raised in connection with the code. The notes having already reached a voluminous size, further noting on details may tend to confusion. It may probably be better to defer action until Mr. Couchman takes charge and becomes conversant with the general position of technical education in the Presidency.

S.K.—3-5-16.

C. RAMANUJA ACHARIYAR—3-5-16.

It would be waste of time to argue the matter further with Mr. Tressler. I would allow Mr. Couchman to take charge and make himself conversant with the work of the department and the final form of the Code can be settled with his help.

P. RAJAGOPALA ACHARIYAR—4-5-16.

P[ENTLAND]—5-5-16.

File regarding Technical Education Code.

In accordance with the recommendations of the Industrial Conference held at Ootacamund in 1908 all the industrial schools which were till then under the Director of Public Instruction were transferred to the charge of the Director of Industries and that officer was called upon to prepare and submit for approval his recommendations as to the constitution, the functions and the curriculum of industrial schools. A set of draft rules regulating the grant of aid to these schools was also called for. When Mr. Tressler became the Acting Director he took up the preparation of the draft rules for regulating grants-in-aid but could not proceed further for want of a definite policy in regard to industrial education. He accordingly submitted with his letter No. 68 G., dated the 28th July 1910, the outline of a policy for the approval of the Government. But no definite orders were then passed by the Government thereon, apparently because the orders of the Secretary of State abolishing the Department of Industries had in the meantime been received. By these orders the Director of Industries was replaced by a Superintendent of Industrial Education under the Director of Public Instruction. Nothing definite was done with either the policy or the formulation of the rules for sometime.

Paragraph 3 of G.O. 2894, Revenue, 17th October 1908.

G.O. 1625, Revenue, 18th June 1909.

Page 5 of G.O. 3459, Revenue, 1st November 1910.

Pages 17 and 18 of G.O. 3446, Revenue, 27th October 1910.

Mr. Tressler who succeeded Mr. Chatterton as Superintendent of Industrial Education, however, prepared a note in 1912 dealing exhaustively with the problem of industrial education, its definition, the classification of industrial schools, their curriculum, the qualifications of the staff and pupils, the conditions of recognition and aid, the examinations and the grant of certificates and scholarships. The Director of Public Instruction (Dr. Bourne) was in general accord with the main principles of the note. Though the note was examined in detail, orders thereon were deferred pending final decision of the Secretary of State who had again been addressed in regard to the reconstitution of a Department of Industries in this Presidency. In G.O. No. 892, Educational, dated the 21st March 1914, the Government sanctioned the formation of such a department, and in G.O. No. 833, Educational, dated the 16th July 1914, the Director of Industries was asked to refer his note regarding industrial education to two committees of representatives of educational interests and of employers of labour and to submit their recommendations to Government with his remarks and a draft code for industrial education. These were received in March 1915. The Technical Education Code submitted by him was examined in detail and the modifications proposed therein were embodied in a revised draft prepared by the Government and the latter was sent to the Director of Industries for remarks on the 5th December 1915. The Director's reply was received on the 23rd April 1916. He finds himself unable to accept all the modifications proposed by the Government but has prepared a slightly altered draft of his original Code which he submits for the approval of the Government. There are thus at present *three* drafts of the Code—the original

Pages 2 to 19 of G.O. 833, 16th July 1914.

Director of Public Instruction's covering letter on page 2 of Government Order ibid.

Page 8 of notes to G.O. ibid.

prepared by the Director, the revised one prepared by the Government, and the amended draft recently submitted by the Director. Further consideration of the Code has been held over pending assumption of charge by Mr. Couchman.

P.R.—30-5-16.

The development of industrial schools, schemes in respect of some of which have been before Government for some time, is being held back for want of definite orders on the policy and the absence of the Code.

S.K.—29-5-16.

C. Ramanuja Achariyar—29-5-16.

Mr. Couchman may with advantage see these papers.

P. Rajagopala Achariyar—30-5-16.

Yes.

P[entland]—31-5-16.

Mr. Couchman u.o.

P.R.—1-6-16.

Industrial Education

I have read the draft Industrial Education Code, and I have shown it to several people in Madras, employers and educationalists. No one has a good word to say for it. It is quite out of touch with the realities, both of education and industry, and consists of a purely theoretical structure, based on no experience. The general features of it are, the division of the industrial training into two grades, that intended to produce foremen (the "craftsman's" course) and that intended to produce workmen (the "journeyman's" course). The education is to be divided into two parts, the "practice" stage and the "workshop stage." The "practice" stage is to be of two years' duration and the "workshop" stage of three years' duration. The aim of the practice stage is to produce "skill" in the abstract and of the workshop stage to produce knowledge of how to apply skill in practice. The technological side of the scheme of industrial education is to produce managers and upper subordinates.

The criticism of practical men such as Mr. S. Jackson, the dyeing chemist, and of the weaving master of the Buckingham Mills, is that there is nothing corresponding to this scheme in the English system of education as known to them. No one has ever heard of any proposal to produce different kinds of industrialists by giving different kinds of education, apparently in the way in which bees produce different classes of bees by feeding them on different kinds of food. They say that foremen and also works-managers themselves, in many cases, are men who have had the same education as workmen, and have risen from the ranks by proving their worth in the mill, and by taking advantage of evening classes to make themselves masters of their business. It is only when the manager is the son or relative of the owner or of one of the partners in the business that he is a man of University education. Men who have had a University education, or even a special whole-time course in any trade, are looked upon with suspicion by practical men, the ground of this suspicion being that they acquire dilettante and amateurish ways of looking at problems. The man who gets on is the man who has educated himself while actually working at the trade. I may mention that in several conversations on the same subject with Sir Thomas Holland (though I did not show him the draft Code, nor consult him specifically on it) he expressed most emphatic opinions to the same effect. As he is a professor at the Manchester University, the greatest industrial centre in England, perhaps in the world, his opinions carry special weight. He says that University education, specially of a technological kind, is becoming more and more discredited every day, as the men turned out by it are utterly distrusted by practical business men. To succeed in industry, apparently, a young man must be all along from about the age of 14, in the closest touch with the trade, and, at most, gain his theoretical knowledge while working as a half-timer. This does not, of course, apply to specialists like chemists, who must have a whole-time course in pure science.

If this is the case with managers, how much more will it apply to foremen and workmen? The scheme contemplated in the draft Code of making workmen and foremen by an artificial training stands condemned in the light of modern experience. In the practice stage in Mr. Tressler's scheme boys are, as far as I can gather, to be restricted to formal exercises, i.e., they are to make joints, to cut wood or metal into various shapes, to learn the use of various tools. They are not to make any actual articles. This is exactly what is now condemned by the advocates of "manual training" which is such a vigorous and successful development of English elementary education. It destroys all the interest which the children might otherwise take in their lessons and thereby the lessons lose the greater part of their educational value.

"Industry is everywhere and always for the sake of the product, and to cut loose from this as if it were a contamination is a fatal mistake. To focus on process only, with no reference to the object made, is an almost tragic case of the sacrifice of content to form, which in all history has been the chief stigma of degeneration in education. Man is a tool-using animal, but tools are always only a means to an end, the latter prompting even their invention. Hence a course in tool manipulation only, with persistent refusal to consider the product lest features of trade schools be introduced, has made most of all manual training high schools (in America) ghastly, hollow, artificial institutions." (Stanley Hall, quoted in "the Thinking Hand," page 5, by J. C. Legge, Director of Eduation in the city of Liverpool.)

After the two years of the practice stage the boys are to have three years training in an artificial workshop to be established near the practice school. This workshop is to be on business lines, and when they are in it the pupils are to be made to earn their living. I find it extremely difficult to make out what financial assistance Mr. Tressler proposes to give to the workshop stage of the school. I may say that I should be sorry for the managers of the schools if they were required to understand the Code in its present form with all its recapitulations and redundancies, its bad arrangement, and intermixture of different subjects.

My chief objection to the proposed workshops, however, is that they would not be genuine commercial workshops, and there is every probability that they would not pay their way. The various bodies who manage the present industrial schools now have a free hand in the manner in which they employ their boys. Even small boys can do some productive work, and thus help the finances of the school. Under the new scheme no one is to be admitted to the workshop till after at least two years in the practice stage, in which no commercial work is to be done. But if the workshop does not pay, the scheme falls through. The manager of the Karur school, one of the most successful of the industrial schools, told me plainly that, if the Code was enforced, he would have to close his school altogether, as the separation of the school and the workshop would cost him more than he could afford. This separation is, moreover, opposed to the traditional way in which workmen are trained in all countries in the world. They learn the elements of their trade by helping their parents. It is true that under the modern industrial system in Europe this is not possible in many trades, and this is one of the motives underlying the movement for "manual training" in modern European education.

'The sense of the loss of the old home sides of education has deepened as 'people have realized more and more how difficult it is under modern conditions 'for even a good home to discharge fully the duties of a home. We want to 'introduce into the school more of the atmosphere of life as it is lived, to give the 'scholar more of the environment of life; for it is atmosphere and environment far 'more than direct instruction that give character.' ("The Thinking Hand" page 10.)

The practice stage contemplated in the draft Code would separate the boys entirely from life, confining them to unreal formal exercises. The true training to be aimed at is that which would resemble as closely the old home system, by which the boy watched his father at work, and gradually picked up his trade while helping him.

The scheme, therefore, stands condemned by the latest theories of education (which are really an attempt to revert to the old home system of training) and by experienced industrialists. I would drop it altogether.

Although my ideas on the subject of what should be done with the industrial schools are still rather vague, I am putting them down now, as I may not have a further opportunity.

I feel that Mr. Tressler was right in thinking that there is a need for a definite policy for the industrial schools, and that they are not satisfactory at present, inasmuch as they present rather social "rescue" work than education. Many poor boys are taught a useful method of earning their living, and many good workmen are turned out with a better knowledge of their trades than they would have got elsewhere. I have not had time to visit the schools yet, so I cannot say what they are doing besides this. I am, therefore, trying to arrange with the Director of Public Instruction for Mr. Fyfe, the new instructor in manual training, to be made available for the inspection of all the industrial schools, and I have hopes that he will give his consent. After Mr. Fyfe has inspected all the schools, I propose to get him to prepare a general report on the industrial schools, from which we could settle the question of what should be our general policy in regard to them. I feel that a retrograde step was taken when they were made over to the Industrial Department. They are not industrial schools in the sense that they fill any felt want in the industrial system. An industrial school can only serve an industrial purpose when situated right alongside a real commercial factory. Its true function is to offer to working artizans a means of improving themselves so as to qualify themselves for higher positions. I would retain under the Industrial Department only night schools or half-time schools, admittance to which should be restricted to working artizans, and the teachers in which should be practical working foremen. I am at the present time arranging to start two such schools for plumbers and mechanics in the town of Madras. I feel that most of the present industrial schools should be developed into manual training centres, which should be open to all the boys attending the ordinary elementary schools in the neighbourhood. I look forward to the most valuable results from the recent development of this branch of education by the Educational Department. Two trained European instructors have been got out and are now being employed in teaching manual training partly to the European schools and partly to Indian teachers. As soon as teachers are available, the strongest pressure should be brought to bear on all local bodies to introduce this most valuable element into all their elementary and secondary schools, and liberal help given by the Government to provide them with the apparatus, and to enable them to meet the cost of such courses, which would be of even greater educational value here than in Europe, to mitigate the strong tendency in Indian education to confine itself to book work. In other words, the correct function of the industrial schools should be purely educational, for the value of manual training is not that it prepares boys to become carpenters or blacksmiths but that it is a part of the development of the faculties.

"The essence of preparatory training for manual work does not lie in introducing into our manual training courses tools, machines and materials that belong to a definite profession. The essential thing is to form and practise those organs, mental and physical, which are necessary for the vocation, to form habits of honest work, of carefulness, of thoroughness, and of foresight, and lastly to awaken a real joy in work. If any one gains these qualities in any kind of systematic work (e.g., woodwork) then he possesses and uses them in any kind of manual work which his vocation later may call for."

To sum up, I propose that no change should be made in the present industrial schools till Mr. Fyfe has carefully inspected them and reported what work they are doing now, and what use could be made of them in the educational system. I anticipate that it will be found that they should be replaced under the management

of the Director of Public Instruction and that they will be developed into manual training centres for the use of the boys of all the schools in their neighbourhood. The Industrial Department should have nothing to do with education as such. It should, however, develop the system of night schools or part-time schools for working artizans, and these should be opened in places where, owing to the existence of industries already, there are a sufficient number of artizans to benefit by them.

M. E. COUCHMAN—18-9-16.

HOME (EDUCATION) DEPARTMENT.

Please see Mr. Couchman's note above. He considers that Mr. Tressler's Technical Education Code is faulty in many respects and is not in favour of its adoption without further examination. He accordingly proposes to ask Mr. Fyfe, the Manual Training Instructor for European Schools in the Educational Department, to inspect the industrial schools in the Presidency and to report on them, and then to consider what policy should be followed in regard to these schools. He advises that in the meanwhile no change need be made in the present position of these schools. The question of entrusting to Mr. Fyfe the duties of Inspector of Industrial Schools is now under separate consideration. Mr. Couchman has promised to submit formal proposals in consultation with the Director of Public Instruction. It is for orders whether in the circumstances this file may lie over for the present.

May be approved.
E.A.H.—14-10-16.

E.A.H.—14-10-16.

It may be noted here that the question of developing selected aided industrial schools, such as those at Vizagapatam and Tanjore, with special State aid is lying over pending settlement of a definite policy in regard to industrial schools generally. Apparently the question can be taken up only after Mr. Fyfe's report is received.

S.K.—26-9-16.
N.K.—7-10-16.

E. A. HARVEY—14-10-16.

Print up the file sharp and resubmit.

P. RAJAGOPALA ACHARIYAR—18-10-16.

The notes have been printed and the file is submitted.

S.K.—30-10-16.
N.K.—1-11-16.

E.A.H.—4-11-16.

May I send these papers to Mr. Innes u.o.

P.R.—7-11-16.
P[ENTLAND]—11-11-16.

To Mr. Innes for perusal of the note and current files and remarks, if any, he may wish to make.

There is no urgency at all and Mr. Innes may take his own time over it.

P.R.—12-11-16.

OFFICE OF THE DIRECTOR OF INDUSTRIES.

I have taken advantage of the Christmas holidays to study this file, and I agree with Mr. Couchman that Mr. Tressler's Draft Code should be rejected. It represents a good deal of thought in respect of what is an extremely difficult problem, but the general opinion appears to be that it is far more likely to retard than advance industrial education.

2. I have had several conversations with Mr. Fyfe on the subject of industrial and technical education, and the latter has already fairly definite views as to the lines on which we ought to work. But I am not prepared at present to suggest any cut and dried scheme to Government.

3. As regards existing aided industrial schools, I agree with Mr. Couchman that Mr. Fyfe should be given time carefully to inspect all the existing schools and that we should wait till we get his report before we attempt to decide what policy to adopt in respect of them.

4. The only other clear idea I have is that in any scheme of industrial or technical education we may formulate we must endeavour to enlist the co-operation of such factories and workshops as exist in the Presidency. This was Mr. Chatterton's idea when he proposed his scheme of State apprenticeships and of a school where the apprentices would receive such elementary technical instruction as their education would permit them to assimilate. The ultimate result of this scheme has been that the idea of State apprenticeships has been dropped for the time being and that experimentally we have made a beginning with classes for apprentices and workmen in plumbing and mechanical engineering in a rented school building. It is a modest beginning no doubt, but it is a beginning on the right lines, and if the classes are a success, I hope to start others on the same lines. Mr. Fyfe and I are already discussing possibilities in this direction for the two classes which have been opened have made a very promising start.

G.O. 1092, 17th October 1916.

5. My own feeling is that we must be content with a very humble beginning in the matter of industrial and technical education in Madras, and that for a time we must be content more or less to grope our way. For we must recognize that the possibilities are limited. The country is essentially an agricultural one. We have no coal and fuel is dear. There is no possibility therefore at present of cheap power, and this being so, we can never to hope to make the Presidency an industrial country. Barring a few railway and Public Works Department workshops and a few cotton mills, there are no shops where apprentices can be trained, and there are few openings for the men when trained. Mr. Tressler recognises these limitations clearly enough in paragraph 29 of his draft code. But instead of accepting them, he tried to get past them by an admittedly artificial system of industrial education. He was too impatient. What I think we ought to do first is to get into touch with those in charge of the railway workshops and the factory owners. Some of them are already working at the problem in their own way. Apprentices are admitted to the railway workshops, and in some places (Negapatam for one) schools exist in connection with the workshops. The Buckingham Mills have their own night school, and the Manager of the Coimbatore Mills has already offered to take in a limited number of ~~of~~ Anglo-Indian apprentices with the idea of training them partly in the mill and partly in continuation classes. Perhaps we can help them in their schemes. At any rate we can learn and perhaps make use of their ideas, we can find out what class of men they want, what posts are open to those men and what are the chief difficulties at present—whether in the general education of the men they now get or whether in the lack of facilities for theoretical teaching to supplement the practical training in the workshop or mill. There is no need to summon any more Committees at present. It is a matter for enquiry by Mr. Fyfe and myself. We ought to be able to get sufficient information to enable us to grasp exactly what the problem is. Then it will be time to consider how best to solve it.

6. Probably however continuation classes or night schools established in connection with railway workshops or factories will not cover the whole ground. There is a fairly large demand I think for mechanics for water works, for rice mills and for pumping installations. The Madura Technical Institute and such institutions as the Chengalvaroya Naicker's school and the Anjuman do something to meet this demand. But probably the supply does not meet the demand and more Government schools on the lines of the Mechanical Engineering Section of the Madura Technical Institute may be found necessary. This is also a matter for enquiry.

7. These are merely such provisional ideas as are at present taking shape in my mind. The main point for the moment is whether Government should spend any more time on Mr. Tressler's draft code. I think it should be discarded, and an attempt made to work out some less ambitious and more workable scheme.

C. A. INNES—8-1-17.

HOME (EDUCATION) DEPARTMENT.

Mr. Innes suggests that Mr. Tressler's Technical Education Code need not be further proceeded with. He will presumably submit proposals in due course in consultation with Mr. Fyfe for the development of industrial education in the Presidency.

G.O. 937, 26th August 1915.

2. It may be noted here that in anticipation of the issue of a separate Code for industrial schools all references to the sanctioning powers of the Director of Industries in regard to grants to those schools have been omitted from the Grant-in-Aid Code of the Educational Department. But his powers in that regard are specified in G.O. No. 1194, Educational, dated the 24th October 1914, and in practice the provisions of the Code are being followed in sanctioning grants to industrial schools—vide G.O. No. 1437, Educational, dated the 18th December 1915, and G.O. No. 280, Educational, dated the 16th March 1916. Subject to the orders in this Government Order he may be asked to follow as far as possible the general provisions of the Grant-in-Aid Code in regard to the maximum grants admissible for industrial schools and the procedure to be followed for the disbursement of the grants. A draft demi-official is submitted.

E.A.H.—30-1-17.

3. It is for orders whether these papers *may be recorded* for the present.

S.K.—24-1-17.

N.K.—29-1-17.

E. A. HARVEY—30-1-17.

His Excellency's last note is at page 13. Please see Mr. Innes' note, page 14.

The papers may, I think, be recorded.

Draft demi-official to Mr. Innes is for approval.

P. RAJAGOPALA ACHARIYAR—1-2-17.

P[ENTLAND]—2-2-17.

Issue the demi-official and let me have draft Government Order please.

P.R.—3-2-17.

Demi-official—from E. A. HARVEY, Esq., I.C.S., Under Secretary to Government, Home (Education) Department.

To—C. A. INNES, Esq., I.C.S., Officer in charge of the Department of Industries.

Dated—the 3rd February 1917.

No.—744/15-5.

The Government agree with you that it is unnecessary to bestow further consideration on Mr. Tressler's draft Technical Education Code, and they hope that you will submit in due course, in consultation with Mr. Fyfe, fresh proposals on the subject. Till then, the provisions of the Grant-in-Aid Code may be followed as far as possible in regard to the payment of grants to Industrial schools. Your powers in this respect are laid down in G.O. No. 1194, Educational, dated the 24th October 1914.

A draft order is submitted. The current and notes are already in print. The Government Order may be printed for record.

S.K.—7-2-17.

N.K.—10-2-17.

Yes.

E.A.H.—12-2-17.

G.O. No. 164 Home (Edn), dated the 13th February 1917.

ANNEXURE.

PART I.

General Scheme of Education.

CHAPTER I.—DEFINITIONS.

"TECHNICAL education is that particular type of 'Special education' which "has for its object the training of industrially efficient workers. Its value is accord- "ingly to be judged, not by an academic, but purely by a practical industrial "standard."

Office Note.

8. The definition of technical education seems to be comprehensive enough and may be approved. In his original note, however, Mr. Tressler relegated the term "technical education" to that superior type, which under the present Code is termed 'technological"; but now "technical education" is taken as a general term to denote both the higher and lower types. The terminology has been accepted by the committee; and there seems to be no objection to it. It may perhaps be better to omit the second sentence in this paragraph or replace it by a clause something like this—

Page 3 of G.O. 833, Educational, 16th July 1914.

P.R.—4-7-15.

"and its value is to be judged by a practical industrial standard."

Secretary's Note.

I would retain Mr. Tressler's wording which is forcible and desirably so.

P. RAJAGOPALA ACHARIYAR—4-7-15.

May be accepted.

C. G. TODHUNTER—13-10-15.

"2. In some respects instruction of a technical character may be regarded "as of sufficient general value to warrant its inclusion (in a partial form) in a gene- "ral educational course. But inasmuch as the object of the teaching will not then "be industrial, instruction thus provided cannot be regarded as technical and may "be termed manual training. The object of the training being fundamentally "different in the two cases, technical education and manual training must be "treated as entirely different types of education which it is impossible to combine."

Office Note.

9. Mr. Tressler would class as "manual training" all kinds of instruction which are not strictly "technical" according to his definition. It is, however, submitted that there are other types of education such as typewriting, shorthand, telegraphy, etc., which had hitherto loosely been termed "technical education" and which will not fall under "manual training." Please compare paragraph 3 (1) of the letter to the Government of India, No. 3852, Revenue, dated the 30th December 1912. Thus all technical education which is not of industrial nature need not necessarily be manual training. It is therefore submitted that it would be better if reference to the latter is omitted altogether. If this is approved, the words "and may be termed manual training" and the sentence succeeding it may be deleted; and the words "within the cognizance of this Code" may be added after the words "cannot be regarded as technical", ~~as shown in pencil above.~~

Mr. Tressler does not say that.

P.R.—4-7-15.

Very loosely.

P.R.—4-7-15.

Secretary's Note.

I would make no change.

P.R.—4-7-15.

Further Office Note.

In view of His Excellency's note on page ~~147 infra~~, under which all explanatory and descriptive matter will have to be removed from the Code, the whole of this paragraph may perhaps be omitted.

C.R.—11-10-15.

I think this may be omitted. Manual training is a special branch of education in itself and need not be brought into this Code.

C.G.T—13-10-15.

"3. Industrial workers are broadly divisible into two classes —
"(1) Those who direct the work ;
"(2) Those who actually perform the work ;
"and technical education may be divided into two corresponding classes, the training "of the first class of worker being termed *technological* and that of the second "*industrial* education."

Office Note.

10. In its first resolution the committee of representative employers accept this classification and it may be approved by the Government.

P.R.—4-7-15.

S.K.—15-6-15.
C.R.—20-6-15.

May stand.

C. G. Todhunter—13-10-15.

"4. To a preliminary course of general education, technical education superadds "training of two distinct types, which for want of better terms may be called "'Theoretical' and 'Practical.' Experience has shown that industrial efficiency "demands the invariable association of both theoretical and practical ability, but "developed in different degrees. In *technological education* theory is of paramount "importance ; in *industrial education* it is subordinated to practice."

Office Note.

11. This paragraph seems unnecessary. The aims of the two kinds of education referred to in paragraph 3 are *fully* described in the subsequent paragraphs. The existence of this paragraph may tend to confuse, as it introduces needlessly two new terms "Theoretical" and "Practical" with some apparent specific significance, but really none.

Secretary's Note.

I think paragraph 4 necessary. The difference brought out appears to be vital and I would make no change.

P. Rajagopala Achariyar—4-7-15.

May be omitted with reference to His Excellency the Governor's orders.

C.G.T.—13-10-15.

"5. *Technological* education is intended to afford the higher training necessary "for the technical and administrative control of industry. In a position of this kind "practical skill is not so important as wide knowledge and a capacity to analyse and "think ; to formulate ideas and carry them out. The breadth of training required to "do this successfully necessitates as a basis a good general education which will "enable a student to understand and assimilate as far as possible the various items of "knowledge accumulated in the past in the arts and sciences, and to specialise along "such lines as will be of assistance in the branch of industry in which he engages.

"6. *Technological* education may be of two kinds, which may, for convenience, "be termed 'University' and 'Polytechnic.' Under the university system students "begin their technical studies only after the completion of a good literary education "which, with a technological education superadded, produces a type of man who, so "far as training is concerned, is qualified for the highest position in industry. Under "the polytechnic system the general educational qualification is lower and the type "of man turned out is one who, in general, is qualified only for lower administrative "positions. In both cases the instruction is essentially theoretical in character and "does not in itself constitute a practical qualification : whether it proves to be so or "not depends entirely on the man himself and the way in which he utilises his "opportunities."

Office Note.

12. There seems to be no objection to the retention of these two, except that the last three lines of paragraph 6 appear unnecessary. They merely repeat what has already been stated and may be omitted.

Secretary's Note.

No : the last three lines are very sensible and may be retained.

P.R.—4-7-15.

Further Office Note.

In view of His Excellency's note on page 5 supra all *but the first sentence* of paragraph 5 may perhaps be omitted; and both the paragraphs 5 and 6 may be thrown into one, the second sentence of the combined paragraph running as follows:—

"It is of two kinds, which may for, etc., etc., 'polytechnic'." The last three lines may also be omitted as suggested above.

C.R.—11-10-15.

I would omit everything except the first sentence of paragraph 5 to which I would add from paragraph 6 "and is essentially theoretical in character." The distinction between "University" and "polytechnic" education is not practical.

C. G. TODHUNTER—13-10-15.

"7. *Industrial* education on the other hand is essentially practical in character and "any theoretical instruction given can be regarded as useful only in so far as it ampli- "fies, explains or correlates the inferences drawn from practical experience. Divorced "from practice or even carried to a point beyond the field with which a man is practi- "cally conversant, theoretical training is devoid of value. As a natural corollary it "may be said that theoretical training must always succeed and never precede "practical instruction."

Office Note.

13. In this the second sentence "Divorced from practice or even carried to a "point beyond the field with which a man is practically conversant, theoretical "training is devoid of value" may be omitted as unnecessary.

Secretary's Note.

I consider it very necessary: it is a much needed warning. It should be retained.

P. RAJAGOPALA ACHARIYAR—4-7-15.

I would omit all but the first sentence.

C.G.T.—13-10-15.

"8. *Technological* education therefore is intended to train two kinds of in- "dividuals: those qualified to occupy the highest administrative positions and those "qualified to perform only lower administrative duties, it being however understood "in both cases that the value of the individual, as an industrial unit, will depend on "personal qualifications which the training given can only encourage but cannot "actually impart."

Office Note.

14. The whole of this paragraph is a repetition of what has already been stated in paragraphs 5 and 6 and may be safely deleted.

Secretary's Note.

I see no harm in retaining paragraph (8). We are not drafting a law but a code of rules for the guidance of a department. Fulness is by no means an evil; nor even some repetition and prolixity.

P.R.—4-7-15.

May be omitted with reference to His Excellency the Governor's note.

C.G.T.—13-10-15.

"9. *Industrial* education is also intended to train two kinds of individuals: "the journeyman and the master craftsman, the relation between the two being "comparable with that existing between the higher and lower classes of technologi- "cally trained men."

Office Note.

15. In this paragraph the words "journeyman" and "master craftsman" will have to be transposed. The latter denotes the higher type and the former the lower —vide paragraph 22 of the code, Part I; and the transposition is necessary to fit in with the succeeding words in the paragraph.

Secretary's Note.

The transposition may be done.

P.R.—4-7-15.

May be omitted with the previous paragraph.

C.G.T.—13-10-15.

"10. Technical education is at present provided both directly by the State and "by State aided private teaching institutions. Technological education necessitates "the provision of highly trained teachers with a complete equipment of technical "apparatus and library at command and must at present be regarded as exceeding "that which it is within the power of a private organization to provide. Under "existing conditions technological education will be provided only in special colleges "under public management, the scope of private institutions being strictly limited to "industrial education.

"The training of teachers will be undertaken by the State."

Office Note.

16. This paragraph deals with the question of the agency by which the various classes of institutions are and should be started and maintained. It is needless that a code should lay down the agency which should undertake the establishment of the various types of schools. Further it is not advisable to exclude by specific declaration private agencies from opening particular classes of schools. The code should only lay down the requirements of various classes of institutions and if private management cannot reach that standard, the department will naturally refuse recognition to the institutions started by them; and that will be a sufficient deterrent to ill-equipped ones.

As regards the last line that the training of teachers should only be undertaken by the State, the same reasoning applies.

No such distinction in regard to agencies is made in the Educational Rules. *The whole paragraph may therefore, it is submitted, be omitted.*

Secretary's Note.

I consider the whole of paragraph (10) very necessary as laying down a correct policy. There is no specific *prohibition* of private agencies, but it is pointed out that, *under existing conditions*, only the State can run technological education with its heavy requirements in the matter of teachers, apparatus, etc. As for the training of teachers, there is nothing wrong in saying that the State will undertake it.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

The office-note above almost coincides with His Excellency's orders on page 5 supra.

C.R.—11-10-15.

May be omitted.

C. G. TODHUNTER—13-10-15.

PART I.

CHAPTER II.—TECHNOLOGICAL EDUCATION AND TECHNOLOGICAL INSTITUTIONS.

"11. The Department of Industries will confine its attention to industrial education and no technological education is undertaken in that department except with regard to dyeing and the leather industry, for which no suitable provision is made elsewhere. Instruction in these subjects is of the polytechnic type.

"12. A proposal has been put forward for the conversion of the Engineering College into a general technological college of the university type, but as this type of education is not directly correlated with industrial education it need not be considered in connection with the Department of Industries scheme. For particulars regarding this course application should be made to the Principal, Technological College, Guindy, when and if that College is sanctioned.

"13. Some individuals who have undergone a course of industrial training may, however, possess sufficient ability to profit by a further course of technological training of the polytechnic type and to provide for the requirements of such individuals the Government of Madras have besides providing institutes of their own for the technological teaching of the dyeing and leather trades also acquired an interest in the Victoria Technical Institute, Bombay, which empowers them to enter pupils at that institution for technological training in other subjects.

"14. *Courses.*—The particulars of the technological courses so far arranged are as follows:—

Character and duration of technological courses.

Name of the course.	Where provided.	Duration of course.	Fees per term.
			Rs.
Textile Chemistry	V.T.I., Bombay	8 terms ..	30
Metal Work	Do.	2 ,, ..	30
Leather Trades	Technical Institute, Madras.	6 ,, ..	30
Textile manufacture	V.T.I., Bombay	8 ,, ..	25
Electrical Engineering	Do, ...	8 ,, ..	25
Mechanical Engineering ..	Do.	8 ,, ..	25
Dyeing	Technical Institute, Madura.	4 ,, ..	15

"Further particulars regarding the courses given at the Victoria Technical Institute, Bombay, may be obtained from the calendar of that institute, or on application to the Principal. Regarding the Madras courses information may be obtained from the Director of Industries.

"15. *Admission.*—Admission to all these polytechnic courses is by examination, oral and written, held simultaneously in Madras, or if necessary also at Madura and Bezwada in April of each year. The examination will be of a non-technical character, but will presuppose a general education about equivalent to the Matriculation standard. The examination is not competitive, being intended merely for the purpose of ascertaining whether applicants are fit for higher training or not.

"16. The conditions for admission to the qualifying examination are as follows:—

"(1) Candidates must adduce evidence of at least two years' apprentice training in the workshop of a recognized industrial school or in a commercial factory. This practical qualification the Director has power to waive, but he will do so only in special circumstances and when he is fully satisfied that the candidates' practical training will be completed subsequently.

"(2) Candidates must not be under 16, nor in general, over 20 years of age.

"(3) Candidates must produce a letter of recommendation either from the manager of the industrial school they have last attended, from their present employer or, if not practically trained at all, from the headmaster of the school in which they last studied.

"(4) Candidates must furnish evidence that their general education is up to the required standard (Matriculation) and must also submit a certificate of physical fitness signed by a qualified medical officer.

"(5) If a candidate wishes to complete his education in Bombay and is under "age he must further produce a declaration signed by his parent or guardian sanc- "tioning his prosecuting his studies in Bombay and testifying to his financial "ability to complete a course of study there. If the candidate is of age he must "himself sign a declaration of financial ability to study.

"17. *Fees and stipends.*—The fees for the various courses are given in paragraph "14. To selected candidates proceeding to Bombay the Government of Madras will, "for the present, award a stipend of Rs. 10 per mensem, this being the estimated "difference in the cost of training in Bombay and Madras. Every student shall, "before any stipend is paid to him, enter into an agreement to be executed on stamped "paper in the form described in Appendix XXVI. Such pecuniary assistance will "not be given to pupils attending technological courses provided in this Presidency.

"18. *Scholarships.*—In addition to this general contribution, deserving pupils "proceeding to Bombay may be awarded a further scholarship of the value of Rs. 25 "per mensem, the combined value of the two practically covering the whole of the "cost of living and education at Bombay. These scholarships will be awarded on the "results of the qualifying examination, to applicants who appear to possess special "merit and whose resources are such as to preclude their obtaining further training "except with this State assistance. For technological courses provided in this "Presidency the value of the scholarship will be reduced to Rs. 10.

"Forms of application for admission to the qualifying examination (Appendix "XX), for scholarships (Appendix XXV) as well as all further particulars regarding "these courses may be obtained from the Director of Industries. Application for "scholarships must be made not later than February 1st and application for admis- "sion to the examination not later than 1st March of every year.

"19. In the event of candidates possessing technical qualifications in excess of "the required minimum, they may, at the discretion of the Director of Industries (in "consultation with the Principal of the Victoria Technical Institute when necessary), "be permitted to take an abbreviated course of training at the latter institute. On "this point no hard and fast rule can be laid down. In general, however, a pupil "holding a Craftsman's certificate will be excused one term at the beginning and "one term at the end of his course.

"20. *Attendance and dismissal.*—All students must be regular in attendance. "Students requiring leave must apply to the Principal of the institution and must "not avail themselves thereof without his previous sanction. Continued irregularity "or absence without leave will be regarded as a breach of rules and is liable to lead "to dismissal.

"In the case of students receiving scholarships or stipends, casual leave up to "seven days at a time and fifteen days altogether in the year may be sanctioned on "full scholarship or stipend by the Principal of the institution. Leave for a longer "period will be sanctioned only on loss of scholarship or stipend for the period of "absence and then only on production of medical certificate. Absence for a longer "period *ipso facto* means the cessation of the scholarship or stipend and this will only "be renewed by the Director, on application, after a careful consideration of circum- "stances has shown the application to be reasonable.

"Continued idleness or serious misconduct is a sufficient reason for dismissal. "If students in receipt of stipends fail to complete the course for which the stipend "is offered or if they are dismissed they or their guarantors become liable to Govern- "ment for the refund of the whole amount of the stipend paid (as laid down in the "agreement, Appendix XXVI). If a stipendiary student is removed from the "school by the Principal on account of incapacity no refund will be demanded.

"21. *Examinations.*—At the end of the prescribed course of technical training "an examination will be held, on the result of which technological certificates will "be assigned, but not awarded unless or until the candidate has completed a further "prescribed course of practical training or satisfied the examiners regarding his "practical capacity."

Office Note.

Very necessary.
P.R.—4-7-15.

I see no harm.
P.R.—4-7-15.

Government are *not committed*. The wording of paragraphs (17) and (18) does not make scholarships *obligatory*.
P.R.—4-7-15.

17. This chapter points out to what extent technological instruction will be provided by the State and where such instruction can be had. In dealing with the latter point, details of the working of the Victoria Technical Institute, Bombay, are imported in the chapter. It also commits the Government to the grant of scholarships and other facilities to enable students of this Presidency to prosecute their studies there.

It is submitted that this chapter contains very little of matter to be retained for the purposes of the code. It is not the function of the code to declare where instruction in particular subjects can be had, but only to prescribe general rules for the guidance of institutions if they are started. It is pointed out by Mr. Tressler that in this Presidency technological instruction of the *University* type is nowhere to be had now; and it may not therefore be necessary to lay down any rule in their behalf.

I see no harm in giving full information. I should say that it is an advantage just now.
P.R.—4-7-15.

Paragraph 12 of the draft code may be omitted.
P.R.—4-7-15.

As regards technological education of the *polytechnic* type, this Presidency has at present arranged for instruction in leather and dyeing industries only and for other branches students will have to proceed to Bombay. It does not seem necessary to incorporate in the code, except perhaps as an appendix, details as to the working of the Bombay institute, and much less to say what facilities will be provided by the Government for students proceeding there. Further, so far the Government have only agreed to grant as a *temporary* measure six scholarships annually tenable for four years for students proceeding to Bombay. After two repeated advertisements, only one candidate of the prescribed qualification was forthcoming and a selection of two others had to be made from those who did not possess the minimum general educational qualifications laid down. Thus the continuance of this scheme of scholarship depends upon the success which may attend in future years the endeavour to secure qualified candidates. It will not therefore be advisable to commit the Government now definitely and permanently to a scheme of scholarship the success of which has yet to be proved. Mr. Tressler's idea is that the Government should subsidize the Bombay institute by initial and recurring grants so that an interest might be acquired therein by the Government. This question has yet to be considered and decided upon. In the meanwhile, it is undesirable to refer to it in the code. The present scheme of temporary scholarships may be printed as an appendix to the code, if necessary.

G.Os. 613, Educational, 10th July 1912 and 725, Educational, 8th August 1913.

G.O. 1029, Educational, 1st September 1914.

I see nothing in the draft code *committing* the Government to a *permanent* scheme of scholarships.
P.R.—4-7-15.

Quite so.
P.R.—4-7-15.

As matters *now* stand, we *have* to work in collaboration with the Bombay institute. There is no use in ignoring that. The references to the Bombay institute appear to me unobjectionable. B
P.R.—4-7-15.

In respect of the dyeing and leather industry in which subjects instruction will be, at present, provided in this Presidency, a few general rules as to admission, etc., have already been approved in individual Government Orders. These alone may be at present incorporated in the code in general language. If subsequently any further branches are opened and the code needs revision on that account, alterations may then be made.

G.Os. 613, Educational, 10th July 1912 and 725, Educational, 8th August 1913.

That is of course understood.
P.R.—4-7-15.

If these are approved, the following alterations in this chapter may be made.

Paragraphs 11 to 13, 14 (portion), 17, 18 (portion) and 19 will then be wholly unnecessary and may be omitted and the other paragraphs have to be adapted to the limited requirements referred to above. The following set of rules for this chapter is suggested :—

"Technological education of the University type is beyond the purview of this Code.

"As regards technological instruction of the polytechnic type, the opening and maintenance of institutions for the purpose will be specially controlled and sanctioned by the Government, as such education necessitates the provision of highly trained teachers with a complete equipment of technical apparatus and library at command.

"The duration of the course will generally extend from four to six terms and the fees per term from Rs. 15 to Rs. 30 to be determined according to the nature of the subject with the approval of Government in each case.

"Admission to all the polytechnic courses will be limited to candidates who have at least completed their high school course and possess school-leaving certificates considered by the Director of Industries to evidence satisfactory progress.

Cf. paragraph 15, page 4 of code and paragraph 13 (2) of Dr. Marsden's letter, page 8 of G.O. 725, Educational, 8th August 1913, also paragraph 9 of Mr. Guthrie's letter, page 8 of G.O. 613, Educational, 10th July 1912.

"Candidates must adduce evidence of at least two years' apprentice training in the workshop of a recognized industrial school or in a commercial factory. This practical qualification the Director has power to waive, but he will do so only in special circumstances and when he is fully satisfied that the candidates' practical training will be completed subsequently.

A

"Candidates must not be under 16, not in general over 20 years of age.

"Candidates must produce a letter of recommendation either from the manager of the industrial school they have last attended, from their present employer or, if not practically trained at all, from the headmaster of the school in which they last studied.

"Candidates must submit a certificate of physical fitness signed by a qualified medical officer.

"Applications for admission to the course should be made to the Director through the head of the institution not later than the 1st of March of every year.

"All students must be regular in attendance. Students requiring leave must apply to the Principal of the institution and must not avail themselves thereof without his previous sanction. Repeated irregularity or absence without leave or continued idleness or serious misconduct will be regarded as a breach of rules and may lead to dismissal.

"At the end of the prescribed course of technological training an examination will be held under the direction of the Director of Industries on the result of which technological certificates will be assigned by him but not awarded unless or until the candidate has completed a further prescribed course of practical training or satisfied the examiners regarding his practical capacity."

In the above draft of the rules, the separate special examination for admission, referred to in paragraph 15, has been omitted, as neither of the Government Orders containing the rules relating to the leather and dyeing schools prescribes any such examination. Further, where a school-leaving certificate showing tolerably good progress is produced, there seems no reason why the candidate should be subjected to any further examination. In lieu of the examination, however, it has been proposed, subject to approval, to substitute the prior approval of the Director to the candidate's fitness.

G.Os. 613, Educational, 10th July 1912 and 725, Educational, 8th August 1913.

I see no objection to the special examination.
P.R.—4-7-15.

Reference to scholarships has also been omitted, as no definite scheme in that regard has yet been approved by the Government. As a matter of fact, Dr. Marsden specifically recommended that no scholarships should be granted for the dyeing class.

Paragraph 6, page 6 of G.O. 725, Educational, 8th August 1913.

Secretary's Note.

I have considered paragraphs 11 to 21 with some care. The only change I have to suggest is the omission of paragraph 12.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office note.

With reference to His Excellency's note on page 5 supra references to the Bombay Victoria Technical Institute and the special scheme of scholarships tenable in that institution will have to be omitted, as the proposals of Mr. Tressler to endow the institution and institute sholarships have been disallowed.

The revised draft rules for this chapter suggested at "A" on page 20 ante are for approval. They are based on the Government orders already issued sanctioning the dyeing and leather trade classes.

In connection with the proposal to endow the Victoria Technical Institute, the Secretary observed that the entries in the Code relating to this institution should be confined to a description of the scholarship scheme, already sanctioned and now in force. It has been proposed at "B" on page 18 supra that the scheme * should be printed as an appendix to the Code. For orders as to whether this will do.

Paragraphs 1 to 5 of G.O. 1029, Educational, 1st September 1914.

C.R.—11-10-15.

I would say—

"The only subjects in which technological instruction is now given in this "Presidency are dyeing and leather work. The course for the former is four terms "and the fee Rs. 15 per term and the course for the latter six terms and the fee "Rs. 30 per term.

"Candidates for admission to these classes should be not under 16, nor "over 20 years of age. They must produce satisfactory school-leaving certificates, "and certificates of character from their last schoolmaster or employer. Preference "will be given to candidates who have undergone at least two years' apprentice "training in the workshop of a recognized industrial school or a commercial factory.

"Applications for admission should be made to the Director of Industries not "later than the 1st March."

"All students must be regular in attendance. Students requiring leave must "apply to the Principal of the institution and must not avail themselves thereof "without his previous sanction. Continued irregularity or absence without leave will "be regarded as a breach of rules and is liable to lead to dismissal.

"At the end of the prescribed course of technical training an examination "will be held, on the result of which technological certificates will be assigned, but "not awarded unless or until the candidate has completed a further prescribed course "of practical training or satisfied the examiners regarding his practical capacity."

Technical and applied chemistry, sanitary engineering and plumbing, textile manufacture, electrical engineering and machanical engineering is given at the Victoria Technical Institute, Bombay. The course covers eight terms in all cases. The fee is Rs. 30 a term for the first subject and Rs. 25 a term for the rest. To encourage study of these subjects the Madras Government are prepared to give a limited number of scholarships annually to students proceeding to Bombay subject to the following rules:—

The value of the scholarship will be Rs. 30 a month.

Applications for scholarships should be submitted to the Director of Industries not later than 1st February in the form printed as appendix—written in the candidates' own writing.

Candidates should be either graduates in Arts or have passed the intermediate examination of the Madras University. Candidates 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. The applications should show clearly age, nationality and general educational attainments.

The holders of the 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, however, be required to find two sureties to execute an agreement, providing for the refund to the Government of the amount of the scholarship, should he fail to obtain the diploma granted at the end of the course.

The scholarships will be disbursed through the Principal of the Bombay Institute. In case the Principal reports adversely about any scholarship-holder, the scholarship will be stopped.

PART I.

CHAPTER III.—INDUSTRIAL EDUCATION.

"22. Unlike the two types of technological education, the 'university' and "'polytechnic' type, which are entirely distinct, the two types of industrial educa- "tion (which may be termed the 'journeyman' and 'craftsman' types) are closely "connected, the latter being an extension and amplification of the first. A journey- "man is a man who has merely learnt a trade, whereas a craftsman is a man who "also in addition knows something of general principles; possesses, in fact, a certain "theoretical knowledge in addition to practical skill. For purposes of efficiency a "journeyman requires only that minimum amount of general education which every "thinking being ought to possess: a craftsman, on the other hand, must carry his "education to a point enabling him to understand text-books with a certain amount "of ease. It will be observed that the practical qualification is the same in both "cases, but that the craftsman's course of training includes also theoretical training "and calls for a higher standard of general education than that prescribed for "journeymen."

Office Note.

18. The third sentence in this paragraph seems unnecessary and may be omitted. The expression therein, viz., "education which every thinking being ought to possess" is very vague. What is aimed at by this sentence is sufficiently made clear by the last clause of this paragraph.

Secretary's Note.

I would make no change in paragraph 22.

P. RAJAGOPALA ACHARIYAR—4-7-15.

I would say—

"Industrial education is of two types, one suited for the training of what may be termed a journeyman, that is, a man who has merely learnt a trade, the other suited to produce a craftsman, that is a journeyman with some theoretical knowledge of first principles added to his practical skill."

C. G. TODHUNTER—13-10-15.

"23. Whilst it is eminently desirable that pupils should have attained the "minimum standard of general education required before attempting to learn a trade "it is at present impracticable to insist on this point and any system of industrial "education must therefore make provision not only for practical and theoretical "training but for general education also."

Office Note.

19. The principle that arrangement for industrial education should also provide for general education has already been recognized by this Government in connection with the Madura Technical Institute. In the subsequent paragraphs Mr. Tressler proposes that especially in the case of craftsman's course special arrangements should be made to provide general education up to the fourth form standard so that candidates who come up to study for the journeyman's course may have opportunities of continuing their studies to the higher grade. At the informal conference it has been accepted as necessary that there should be provision for general education also. This paragraph may therefore be accepted.

Paragraph 7 of Mr. Chatterton's letter on page 14 of G.O. 647, Educational, 18th July 1912, and paragraph 7 of the order, page 34 of the Government Order.

P.R.—4-7-15.

The language of this paragraph does not however seem suited to a Code. The substance of this paragraph may perhaps be put in the following form:—

"In order to provide for cases where candidates before attempting to learn a trade do not possess the minimum standard of general education required, it is desirable that the scheme of industrial education must make provision not only for practical and theoretical training but for general education also."

Secretary's Note.

Mr. Tressler's wording is more forcible and I would leave it alone.

P.R.—4-7-15.

Further Office Note.

Please see note on page 32 below.

C.R.—11-10-15.

The draft may stand with the addition of "generally" after "at present" in line 3.

C.G.T.—13-10-15.

"24. *General Education.*—General education may be divided into two parts: "the first covering the amount of education required by a journeyman, the second "covering the extra amount of education required in connection with the craftsman's "course. It has been decided that the minimum standard of general education for "the former shall be fixed as the fourth standard and the minimum for the latter as "the fourth form."

Office Note.

20. The standard of general education prescribed does not seem high. In the original note of Mr. Tressler, it was proposed to fix the *third* form as the standard of qualification for the normal training stage, almost corresponding to the craftsman's stage in the present Code, and the fourth standard as the qualification for the workshop stage. While the latter agrees with the present proposal, the standard of the former has been raised from the third to the fourth to the industrial pupils, though the question was specifically put to it. The matter has to be settled in consultation with the Director of Public Instruction. Probably three hours a day may be presumed to be available for the general education and night classes are also suggested.

Page 19 of G.O. 833, Educational, 16th July 1914.

The Director of Public Instruction has to be asked.

P.R.—4-7-15.

The Director of Public Instruction has also to be consulted as to whether he agrees to retain the control of the general education classes in industrial schools and whether he can arrange for their inspection, etc. The Director of Public Instruction has undertaken to control and advise regarding the classes in jails, the criminal settlements, etc.

Yes. The Director of Public Instruction has to be asked.

P.R.—4-7-15.

G.O. 1849, Judicial, 11th September 1913.

This paragraph may on the whole be retained with the slight modification suggested at **A** on page 25 *supra*.

S.K.—15-6-15.

C.R.—20-6-15.

[~~Demi-official No. 744-1, Educational, dated the 9th July 1915.~~]

Demi-official—from the Hon'ble Mr. H. DUNCAN, Acting Director of Public Instruction.

To—the Hon'ble Mr. C. G. TODHUNTER, I.C.S., Acting Secretary to Government, Educational Department.

Dated—Madras, the 23rd July 1915.

No.—98.

Please refer to Mr. Rajagopala Achariyar's demi-official No. 744-1, Educational, dated 9th July 1915.

I am afraid I cannot agree to Mr. Tressler's proposals. It is obviously impossible to compress into a half-time course of four years the work of a four years' full-time course.

Again, until I have fuller information regarding the working of these schools, I am not in a position to accept the proposal that they be inspected by officers under my control. There is the danger of possible friction between the Departments of Education and Industry unless the limits of administrative and financial control that bound the functions of each department with regard to these schools are clearly laid down at the outset.

If you so desire it, I shall note in detail on paragraph 24 of chapter III of part I of the proposed Code.

P.S.—I have sent to Madras for the Code which was forwarded to me with Mr. Rajagopala Achariyar's letter and will send it to you in a day or two.

Demi-official—from the Hon'ble Mr. C. G. TODHUNTER, I.C.S., Acting Secretary to Government, Educational Department.

To—the Hon'ble Mr. H. S. DUNCAN, Director of Public Instruction.

Dated—Ootacamund, the 29th July 1915.

No.—2576-1.

With reference to your letter No. 98 of the 23rd instant, I am to request you to note in detail on paragraph 24 of chapter III of part I of the draft Technical Education Code and to say that any suggestions you have to offer regarding the organization and control of general education classes in industrial schools will be welcome.

fourth form. It cannot be verified whether the standard of *industrial* education now proposed for the higher course (craftsman's) necessitates the higher general education standard. It is in the fourth form that a beginning is made in the study of sciences, etc., and the study of a year in these subjects would only be a desirable acquisition on the part of the candidates. The proposals may therefore be approved.

Yes.
P.R.—4-7-15.

A

Yes.
P.R.—4-7-15.

In the second sentence of this sub-paragraph the words "it has been decided that" may be omitted.

For the last sentence may be substituted—

"The minimum standard of general education for the former is approximately that of the fourth standard and for the latter that of the fourth form."

C. G. TODHUNTER—13-10-15.

"The fourth standard of attainment is that testified to by the ordinary "lower elementary certificate and as the instruction is elementary and easily "obtainable, no special courses, peculiar to industrial schools, need be devised. A "certificate, termed the craft qualification certificate, from an Inspector of Schools to "the effect that a pupil has passed the fourth form in a secondary school represents "the higher qualification, but special classes may also be constituted, if necessary, in "connection with all industrial schools recognised to teach up to the higher (crafts-"man's) standard. These classes, in which only subjects of industrial value will be "taught, will carry on a pupil from the lower elementary standard to the fourth form "standard by a half time course of instruction extending over a period of four years. "These classes must conform to the general rules of the Department of Public "Instruction and will be inspected by an officer of that department who will, at the "end of the course, award craft qualification certificates (abbreviated course) to "pupils who duly complete it.

"For industrial purposes the full and abbreviated certificates are of equal value "and will be treated as such. The control and organization of these special classes "is in the hands of the Department of Public Instruction, but application for their "creation and recognition must, in the first instance, be made to the Director of "Industries. If approved, the application will be forwarded to the Director of "Public Instruction which latter officer will then deal with all further questions "connected with the classes. Applications *will not be forwarded by the Director of "Industries except those on behalf of schools considered by the Director as competent to "provide theoretical training.*"

Office Note.

21. It is proposed to compress all the instruction that is usually given in the first four forms in a half-time course of four years. From the proceedings of the conference it will be seen that no definite decision was arrived at with reference to the question whether all the subjects of the ordinary school curriculum should be taught

Demi-official—from the Hon'ble Mr. H. S. DUNCAN, Acting Director of Public Instruction.

To—the Hon'ble Mr. C. G. TODHUNTER, I.C.S., Acting Secretary to Government, Educational Department.

Dated—Ootacamund, the 25th August 1915.

In reply to your demi-official No. 2576–1, Educational, dated 29th July 1915, I offer the following suggestions and observations on paragraph 24 of chapter III of part I of the draft Techincal Education Code :—

A 1. For "lower Elementary certificate" read "Elementary school-leaving certificate".

2. "A certificate, termed craft qualification certificate, from an Inspector of Schools . . represents the higher qualification."

No such certificate is required because a transfer certificate from the headmaster of a recognized secondary school showing that the pupil is fit for promotion to fifth form should suffice.

3. '*These classes, in which only subjects of industrial value will be taught.*'—I do not know what these subjects are.

4. "*Will carry a pupil from the lower elementary standard, extending over a period of four years—These classes must conform to the general rules of the department of Public Instruction.*"—This proposal is obviously impossible unless the Director of Industries is prepared to restrict the subjects taught to at most half of what is now taught in schools. And besides the classes cannot conform to the general rules of the Educational Department unless they follow the courses recognized by this department. At present the Director of Public Instruction prescribes no courses for pupils in secondary schools up to third form but all pupils in and above fourth form are presumed to have a secondary school-leaving certificate maintained on their behalf, and the secondary school-leaving certificate course is more or less defined under the scheme for the award of secondary school-leaving certificates. According to the proposal of the Director of Industries it would appear that he desires the Director of Public Instruction to recognize a fourth form half-time instruction in subjects which I may consider do not give a "general education." I suspend further remarks on this point until I know what subjects the Director of Industries considers should be taught.

5. "*And will be inspected by an officer of that department.*"—This proposal will necessitate additional appointments in the Educational Department to cope with the additional work. There is no objection to the inspection being done by officers of the Educational Department provided that the schools are inspected on the lines on which other recognized institutions working under Madras Educational Rules are inspected and provided that the inspecting officers are in no way under the control of the Director of Industries.

The Code of Regulations regarding Technical Education assumes the existence of an Inspector of Industrial Schools. If a competent graduate inspector is appointed, there would appear to be no need for this department to undertake the organization or control of any of the "general educational classes" proposed by the Director of Industries.

6. "*Who will at the end of the course award craft qualification certificates (abbreviated course).*"—This proposal would apparently necessitate a separate examination which I do not favour. A certificate from the head of the institution to the effect that the pupil has satisfactorily completed his general education course should be sufficient.

7. "*The control and organization of these special classes . . . . to the Director of Industries. If approved . . . . connected with the classes.*"—This suggestion implies a manner of dual control, a policy which I do not favour.

There is no explicit information in regard to the financial provision that is necessary for the conduct of these general education classes, but it would appear from a perusal of the Code that they are to be financed from the funds at the disposal of the Director of Public Instruction and not from those at the disposal of the Director of Industries. I should like this point made clear before I proceed to discuss it.

In section A I have examined paragraph 24 of chapter III in detail. I shall now proceed to a general survey of the scheme. I may state here that there is no difficulty in working the general educational scheme up to and including fourth standard, nor up to the fourth form of the ordinary secondary school course.

In the first paragraph of section 24 the Director of Industries states that for the craftsman's course the minimum standard of general education shall be the fourth form and yet in the succeeding paragraph he talks of a half-time course of instruction extending over a period of four years as an equivalent minimum of general education. I cannot reconcile the two statements. Apparently he is content with the education given in secondary schools recognized by the Department of Education. If he can utilize the existing facilities well and good: if, however, he desires some other form of instruction, e.g., in "only subjects of industrial value," I should like him to state more explicitly what subjects he wishes to be taught, what hours he intends should be devoted to these subjects, whether they are to be taught necessarily in industrial schools or whether use cannot be made of existing secondary schools, if the latter

whether the classes are to be held during the normal school day or whether in the early morning or in the evening, in order that the Director of Public Instruction may be able to advise thereon.

I have criticised the scheme in the belief that when more detailed and definite information is available it will be possible to formulate a general education course which will be acceptable to the Director of Industries. A modified and organized scheme on the lines proposed by the Director of Industries may work extremely well, but I am at present, in view of the meagre details before me, unable to extend such approval to it as I should wish.

I would therefore suggest that Mr. Tressler be asked to state

(1) What are the subjects of industrial value to be taught in the special classes.

(2) Whether these subjects are to be taught only in industrial schools, or whether it is his intention to have them taught in existing secondary schools, or in both.

(3) If they are to be taught in secondary schools, whether there are to be special classes in these schools.

(4) Whether it is his intention and desire to have a separate examination for the award of "craft qualification certificates (abbreviated course)".

5. Whether the expenditure on half-time classes is to be met from the Educational or the Industrial budget.

Demi-official—from the Hon'ble Mr. C. G. TODHUNTER, I.C.S., Acting Secretary to Government, Educational Department.
To—K. T. B. TRESSLER, Esq., Director of Industries.
Dated—Ootacamund, the 27th August 1915.
No.—2929-1.

In paragraph 24 of part I of the draft Technical Education Code it is stated that the minimum standard of general education required for the craftsman's course is the fourth form. It is also stated that special classes in which only subjects of industrial value will be taught may be organized and these will carry a pupil on from the lower elementary standard to the fourth form by a half-time course of instruction extending over a period of four years. In the examination of these proposals the following questions have been raised :—

(1) What are the subjects of industrial value which are to be taught in these special classes ?

(2) Are these subjects to be taught only in industrial schools or is it your intention to have them taught in existing secondary schools or in both ?

(3) If they are to be taught in secondary schools, are there to be special classes in these schools ?

(4) Is it your intention and desire to have a separate examination for the award of "craft qualification certificates (abbreviated course)"?

(5) Is the expenditure on these half-time classes to be met from the Educational or the Industrial budget ?

I am to request you to furnish me with brief answers to these five questions.

Demi-official—from K. T. B. TRESSLER Esq, Director of Industries.
To—the Hon'ble Mr. C. G. TODHUNTER, I.C.S., Acting Secretary to Government, Educational Department.
Dated—the Madras 31st August 1915.

Your letter of 27th.

(1) English, arithmetic, mathematics, science and drawing.

(2) All industrial higher grade schools are—or should be associated with secondary schools and the above subjects are to be taught in existing secondary schools to industrial pupils. They are not to be taught in industrial schools as

(*a*) I want to avoid reduplication of general literary staff.

(*b*) I want ultimately to eliminate the courses and make industrial pupils finish their schooling before taking up handicraft.

(*c*) I think the courses can be worked in with the ordinary secondary school ones. My idea is for industrial pupils to take half the ordinary full literary courses in half the time.

(3) Vide (*c*) above. On this point I cannot offer an opinion as I know nothing about the system of general education. If (*c*) is unworkable it will be necessary to have special classes.

(4) A special examination seems unnecessary : I understand that it is usual in the Department of Public Instruction to accept a certificate from the head master. This will suffice.

(5) I have no views on this point. If special expenditure has to be incurred it might be paid for by Industries.

Finally my object in leaving the general education side to the Department of Public Instruction is because they have specialised knowledge on the matter and we in the Industries have not. It seems illogical therefore for us to deal with questions of general education, but if the difficulties in the way of Department of Public Instruction control are insurmountable, the Department of Industries will have to take over its own general education.

General education.

As His Excellency the Governor has more than once asked that the Technical Education Code may be pushed forward, I venture to request orders in advance on a preliminary point which has been delaying it the last two months and seems likely to delay it indefinitely. This is the question of general education for the journeymen's or craftsmen's classes. Mr. Tressler prescribes no test for entry to an industrial school (paragraph 23) although he exhorts managers in the strongest terms (paragraph 33) to see that their pupils have finished their general education before entering as they will have no time to do so thereafter. Once they have entered, however, those who have no general education (and they will be the vast majority) have to acquire one as best they can. Before they can pass out of the first stage of all, the "Practice" stage (a 24 months' course), they must produce a certificate of qualification by the fourth standard (ordinarily a five years' course for children). No provision is made for their acquiring this part of their education. The subject is dismissed with the remark that "as the instruction is elementary and easily obtainable no special courses "peculiar to industrial schools need be devised." After passing out of the "Practice" stage, before the pupils can appear for the craftsmen's certificate (a five * years' course), they are required to show that they have qualified by the fourth form standard (a nine * years' course for children, i.e., four years additional to the fourth standard). The manner in which they are to do this is left to the Director of Public Instruction, but provision is made for half-time courses of technical work in order to leave half the day for literary education, and the Director of Industries appears to contemplate confining the course to "industrial" subjects which he defines as English, mathematics, science and Drawing.

* Workshop course, three years, and theoretical (or craftmen's) course, two years (generally) (pages 40 and 41 of the code).

Paragraph 7, page 33 of the Code.

	years.
* Infant class	1
First four classes	4
First four forms	4
	9

The Director of Public Instruction naturally sees difficulties about the scheme, which I venture to think is unworkable. We may agree that it is impossible to insist on any educational qualification before entry, since the schools would get no students else. Once they are in we may agree that it is desirable that a journeyman should be able to read a simple text-book (paragraph 22), preferably in his own language, and that some elementary knowledge of English, mathematics, science and drawing is necessary for the craftsman, but we may leave the manner in which it is to be acquired for the schools themselves to develop. It seems to be out of the question to ask existing schools, which are for the most part under private management, to alter their times and courses in order to suit technical students, or to expect boys put into technical schools because they hadn't the brains for a literary education to take the same course as their brighter compeers while giving only half their time to it. Moreover the full craftsman's course is already seven years so that the half-time course would run to eleven.

Cf. paragraph 188 of the Report by Colonel Atkinson and Mr. Dawson.

I submit therefore that it would be sufficient for the present to enter in the Code—

(1) the present exhortation to managers to admit to technical schools only boys who have completed their general education,

(2) a requirement that they must (either) themselves (or by arrangement with other schools) provide that pupils in the journeymen's course should receive an elementary education approximately up to the fourth standard, and pupils in the craftsmen's course instruction in English, mathematics, science and drawing approximately equal to that given in the fourth form, and

(3) a provision that no pupil shall be promoted from one stage of technical instruction to another until he has satisfied the Inspector of Industrial Schools that he has received sufficient general education to be able to understand the instruction given.

As time goes on we may hope that the development of general education and an increasing appreciation of technical education will render it possible to insist on a qualification before entry, and meanwhile the managers, with the assistance of the Inspector of Industrial Schools, will have worked out a system of night schools or other means of supplementing the general education of their scholars on which it may be possible to base a code of rules. For the present elasticity is above all things desirable.

If the above proposals are approved, the general education portion of the Code will be amended accordingly and the remaining portions of it can then be dealt with.

C. G. Todhunter—6-9-15.

I shall be glad to have the views of the Director of Public Instruction on this.

P[entland]—8-9-15.

To the Director of Public Instruction.

C.G.T.—6-9-15.

Office of the Director of Public Instruction.

I agree that the general education provisions in Mr. Tressler's Code are unworkable and with what Mr. Duncan has written about them.

I would also go further than the Secretary and advise Mr. Tressler to give up the idea that the existing schools can help at all in the general education of his pupils. In the secondary schools the pressure on staffs and accommodation is such that I do not think they could make any special arrangements for industrial pupils. The presence of half-timers in elementary schools would make their working difficult and they also are often over-crowded and under-staffed. I think that the Director of Industries will have to face the difficulty of providing general education in his own schools.

J. H. Stone—18-9-15.

Educational Department.

Submitted to the Secretary.

It is for consideration whether the file may now be sent to the Director of Industries u.o. for further remarks with reference to the Director of Public Instruction note above and he may be asked to state whether he accepts the Secretary's suggestions above with the omission of the words enclosed in brackets in clause (2).

C.R.—18-9-15.

Will the Director of Industries please examine the suggestions and opinions above and note his views thereon as early as possible?

C.G.T.—18-9-15.

Office of the Director of Industries.

I would not be prepared, except as an extreme measure, to make my own provision for general education, as suggested by the Director of Public Instruction. The reason is that general education is outside my province and I do not regard myself as competent to define standards therein.

From the remarks of the Director of Public Instruction I gather that the certificate of the headmasters of schools is accepted as evidence of pupils having attained a certain standard. This being so, it seems to me that the obvious solution is that suggested by Mr. Todhunter, viz., that school managers should make their own handboat for general education. Industrial schools, it must be remembered, are almost invariably associated with general literary schools and it should not be difficult to make the handboat suggested.

I presume it will be possible to get from the headmaster of the literary school a certificate that the pupil is up to the fourth standard or fourth form and this is all that is required. If this is not feasible I would suggest that the literary attainments of the industrial pupils be tested by a sub-assistant inspector who would accompany the Inspector during inspection. His services would be required from January to March.

K. T. B. TRESSLER—

EDUCATIONAL DEPARTMENT.

The Director of Public Instruction had better see this file again with special reference to the note of the Director of Industries and be asked to note again. I should like also to ask, is it out of the question to prescribe a general education qualification now instead of later for admission into an industrial school and if so, why?

P[ENTLAND]—23-9-15.

Will the Director of Public Instruction please advise on the proposal of the Director of Industries that a sub-assistant inspector in each language area should be lent to the Inspector of Industrial Schools to assist him in the literary part of the examination of the pupils? The whole of the examination will take about three months so that each sub-assistant would be wanted for a month or so.

The difficulty about prescribing a general education qualification now is, I understand, that no boys with any general education will go to industrial schools. I enquired at Coimbatore recently and found that they had only one boy who had any general education at all. He had picked up the technical work in half the time the other boys had taken.

C. G. TODHUNTER—1-10-15.

OFFICE OF THE DIRECTOR OF PUBLIC INSTRUCTION.

January, February and March are the busiest months for sub assistants and we refuse all privilege leave in those months except in cases of real urgency. It would therefore be very in convenient to lend men as Mr. Tressler suggests. A reference to my letter about the reorganization of the inspectorate will show how very much overworked these officers are.

Mr. Tressler now says that most of the industrial schools are connected with ordinary schools and I agree with him in thinking that it will be a matter for special arrangement in each case for providing literary instruction. Any such instruction would come under the ordinary inspection of this department or could be made to do so by instructions to officers. As he says certificates from headmasters would show that pupils had reached the necessary standard in the subjects he requires.

I should think that all details about general education might be left out of the Code, it being merely stated that the standards shall be those of the fourth standard and fourth form in the subjects Mr. Tressler requires and that a certificate from a headmaster will suffice. Since this department does not lay down exactly what part of the curriculum should be completed in each form Mr. Tressler had better lay down with some detail what he requires in arithmetic and mathematics, science and drawing. He will find the syllabuses for the first three followed in the three higher forms in the secondary school-leaving certificate scheme printed in the Calendar of the Commissioner for Government Examinations and what the department has to say about drawing in "Hints and Suggestions for Secondary schools." There will be no

particular difficulty about "drawing," if Mr. Tressler adheres to the provision of free-hand and model drawing in connection with mechanical and wood work, but I cannot help remarking that I should suppose what is more wanted is geometrical and measurement drawing. In all the best schools I have seen some very lately in London. in England where industrial work or manual training is taken up drawing and to some extent arithmetic and geometry are closely associated with it. Since drawing is to be part of the general education, I should think freehand and model might be left out of the industrial education courses.

J. H. Stone—2-10-15.

Educational Department.

His Excellency the Governor approves of the revision of the Code being proceeded with on the above lines.

C. G. Todhunter—4-10-15.

It is submitted that the following may be substituted for paragraphs 23 and 24:—

"Before a student can enter upon the workshop stage of the journeyman's course he must produce a certificate from the headmaster of a recognized school to the effect that he has received an elementary education up to the fourth standard and before he can be admitted to the theoretical stage of the craftsman's course he must produce a certificate to the effect that he has received instruction in English, mathematics, science and drawing approximately equal to that given in the fourth form of a secondary school."

The Director of Public Instruction states that the Director of Industries should be asked to lay down with some detail what part of the curriculum of a secondary school should be completed in the fourth form for the purpose of admission to the craftsman's course. Submitted that the Director of Industries may be asked to do this. The curriculum that he may draw up, if approved, may be added to the Code as an appendix.

The Director of Public Instruction also raises the question what kind of drawing is to be taught for the industrial pupils, whether free hand, or geometrical. With reference to this it is submitted that in the general education course the Director of Industries apparently refers to free hand drawing; for, in the industrial school course he proposes "technical" drawing as one of the subjects in the course and apparently this means "geometrical and machine drawing." Perhaps it may be better to include this in the reference proposed above.

C.R.—11-10-15.

May be included as part of a general reference with which the revised Code may be sent to the Director.

C.G.T.—13-10-15.

The draft above as amended may be substituted, omitting the last two sentences.

C.G.T.—19-10-15.

S. Mahadeva Rau.

"25. *Practical technical education.*—The qualifications demanded of all practical "industrial workers are of two kinds—

"(1) skill;

"(2) ability to apply skill commercially;

"and a course of practical instruction may, like the course of general education, be "divided into two parts, the first having for its object the development of skill, the "second the practical application of the skill acquired. These two parts, which may "be termed the 'practice' and 'workshop' sections, are perfectly distinct in aim "and character and are controlled by the Director of Industries."

Office Note.

22. This paragraph may be accepted but the words "like the course of general education" may be omitted as unnecessary and misleading.

Secretary's Note.

I agree.

P. RAJAGOPALA ACHARIYAR—4-7-15.

For the latter part of the clause may be substituted—

"and the course of practical instruction will be divided into two parts, the first having for its object the development of skill, the second the practical application of the skill acquired. These two parts will be termed the 'practice' and the 'workshop' stage, respectively."

C. G. TODHUNTER—13-10-15.

"26. *Theoretical technical education.*—Theoretical instruction is provided only "in connection with the craftsman's course of training [and is also controlled by the "Director of Industries].

"27. A complete course of industrial education consists of various combinations "of the above educational elements, and provides for the following:—

"*Journeyman's course.*

"General education			Lower (fourth standard) training.
"Technical education.	Practical ...	...	Lower (practice) plus higher (workshop) training.
	Theoretical	...	*Nil.*

"*Craftsman's course.*

"General education			Lower (fourth standard) *plus* higher (fourth form) training.
"Technical education.	Practical ...	...	Lower (practice) plus higher (workshop) training.
	Theoretical	...	Theoretical training.

"*Note.*—Wherever hereafter in this Code, the words 'practical' or 'theoretical' occur in connection with a course of instruction, it is implied, if not expressly stated, that they refer solely to technical education of an industrial character."

Office Note.

P.R.—4-7-15. | 23. There seems to be no objection to these two paragraphs.

S.K.—15-6-15.

C.R.—20-6-15.

These paragraphs only repeat what has been said before and may be omitted from the abbreviated Code.

C.G.T.—13-10-15.

"28. The general educational element is provided for in the Department of "Public Instruction. Strictly speaking, the practical element also should be omitted "from the scheme of training arranged by the Department of Industries. The natural "method of giving a pupil a practical education is to send him to a factory and make "him try and earn a living. Here his practical training consists, not of a definite "system of instruction, but of facilities for picking up information. [Only such "apprentices as possess the faculty of 'acquisitiveness' qualify as practical workmen, "but this faculty is considerably developed amongst the class of individual which in "Europe sets out to learn a trade. Further, the supply of raw material for training is "sufficiently great there to allow for the wastage inevitably associated with such a "system of natural selection and still furnish an adequate supply of trained labour. "Again the great development of industry in Europe furnishes adequate opportunities "for apprentice training in factories.

"In India the situation is entirely different. The faculty of 'acquisitiveness' "is not generally developed, the supply of raw material for training is limited and "factories are few, so that the opportunities for apprentice training are few also]. "The system of apprenticeship (which represents the natural system of training) will "be encouraged as far as possible, but it does not adequately meet Indian requirements "and must therefore be supplemented by an artificial system of training which may be "termed the industrial school system."

Office Note.

24. This paragraph contains much matter which may be removed as unsuitable for the purpose of the Code. The first sentence is unnecessary, as it is a repetition of what has already been stated in paragraph 24. The second is also needless. The portion from the fifth sentence downwards "Only such apprentices as possess the "faculty of 'acquisitiveness' qualify as practical . . . . training are few "also", may perhaps be omitted also, as it is of the nature of a report. The *remaining* portions with a slight modification as shown below may be substituted for this paragraph :—

"The natural method of giving a pupil a practical education is to send him to a factory and make him try and earn a living. Here his practical training consists not of a definite system of instruction, but of facilities for picking up information. This system of apprenticeships in workshops will therefore be encouraged as far as possible ; and where it is not adequate it should be supplemented by an artificial system of training which may be termed 'the industrial school system'."

Secretary's Note.

I would rather make no change. There is no harm in the public knowing to some extent the *reasons* which have influenced us in framing the different rules.

P. Rajagopala Achariyar—4-7-15.

Further Office Note.

It is for consideration whether the draft rule suggested above may be approved. If this is considered as a declaration of policy, the whole of this paragraph may be omitted, the following being added to the next paragraph (29) :—

"There are two systems by which practical training may be acquired, viz. : "the apprenticeship and the industrial school system. The former is preferable."

C.R.—11-10-15.

See next page.

C. G. Todhunter—13-10-15.

"29. The essential difference between the two systems is that industrial schools "provide practical training as part of the school curriculum whereas in the appren- "tice system pupils receive their practical training outside the school in a convenient "factory or workshop."

Office Note.

25. Though this paragraph is a repetition, it may be retained as making the position clearer ; but it may be added to the previous paragraph.

Secretary's Note.

I would leave it alone.

P.R.— 4-7-15.

We may substitute for this and the previous paragraph—

"The practice and workshop stages may be completed either as an apprentice in a factory or in an industrial school. The former is preferable."

We want following this a rule showing the period to be covered by—

(1) the practice stage;
(2) the workshop stage; and
(3) the craftsman's course.

The qualifying term of apprenticeship might also be stated.

Following this again we might add, instead of rule 33—

"To provide specially for the case of pupils who have little or no general education, half-time courses may also be arranged, but this course is not recommended."

C. G. TODHUNTER—13-10-15.

"30. As stated, the general educational element in the present scheme of industrial education is to be provided by the Department of Public Instruction. Under the apprenticeship system the practical element also falls outside that part of the scheme that the Department of Industries directly controls. To ensure the required standard of attainment in these elements, whether for purposes of admission to the Department of Industries courses or for purposes of certification, certain qualifications must be prescribed. So far as they relate to general education these qualifications have already been defined: of the practical capabilities of an individual trained in an outside workshop, the journeyman's examination constitutes the test."

Office Note.

26. The first sentence of this paragraph may be omitted as being a repetition.

Though the succeeding sentences are also open to similar objection, there seems no harm in retaining them as they serve to balance so far as regards the apprentice system what is said in the next paragraph about the industrial school system.

Secretary's Note.

I would retain the whole of paragraph 30.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

It is submitted that the whole of this paragraph may be omitted as it is redundant and also of a descriptive character.

C.R.—11-10-15.

"31. In the industrial school system, there are three component stages in the complete higher (craftsman's) course of training, the completion of each component stage being marked by a certificate. The lower (journeyman's) course includes only the first two components. These component stages and certificates are as follows: The practice stage of practical training completed by the Industrial School-leaving certificate, the workshop stage of practical training completed by the journeyman's certificate and the stage of theoretical training completed by the craftsman's certificate.

"Promotion from the practice to the workshop stage can only be made when a pupil has secured an Industrial School-leaving certificate [the educational qualification for which is the Lower Elementary certificate], and pupils will only be admitted to the theoretical stage when they [hold the craft qualification certificate (fourth form) and] also possess or are under training for the journeyman's certificate."

Office Note.

P.R—4-7-15. | 27. This paragraph does not seem objectionable and may be accepted.

S.K.—15-6-15.
C.R.—20-6-15.

"32. In the apprentice system, practical training (the journeyman's course) is "not included in the scheme of instruction. There is accordingly only one course "and consequently only one certificate: the craftsman's certificate.

"The departmental examination held on the completion of the practical "(journeyman's) course is however open also to apprentices who have not been "trained in an industrial school provided that they have put in a full-time period of "apprenticeship (Part III, paragraph 29) in a regular factory or workshop."

Office Note.

28. The first sentence of this already occurs in paragraph 29 and accordingly the words "practical training (the journeyman's course) is not included in the scheme of instruction" may be omitted and the other sentence in this sub-paragraph may run as follows:—

"In the apprentice system, there is only one course and consequently only one certificate: the craftsman's certificate."

The other portion of this paragraph seems alright.

Secretary's Note.

I would make no change.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Rules 30, 31 and 32 are very confusing, especially the proposal to grant an "industrial school leaving certificate" in the middle of the course and the distinction that is apparently drawn between the "practical (journeyman's) course" and the "practice stage". I would endeavour to straighten them out as follows:—

At the close of the practice stage an examination entitled the practice stage examination will be held at every industrial school and no pupil will be allowed to proceed to the workshop stage until he has passed this test in addition to producing the certificate of general education required by rule— .

At the close of the workshop stage there will be held an examination entitled the journeyman's examination and no pupil at an industrial school will be allowed to proceed to the craftsman's course until he has passed this test in addition to producing the certificate of general education required by rule— .

Apprentices are not admitted to the practice stage examinantion, but apprentices who wish to proceed to the craftsman's course may be admitted to the Journeyman's examination at any school under departmental management on producing a certificate of general education of the kind required by rule—for admission to the craftsman's course.

A certificate entitled the journeyman's certificate will be given to all persons who pass the journeyman's examination.

At the close the craftsman's course a further examination will be held entitled the craftsman's examination. All persons passing this examination will be given a certificate entitled the craftsman's certificate.

C. G. TODHUNTER—13-10-15.

"33. The two courses above defined, viz., the journeyman's and craftsman's "courses, represent the regular or complete courses of industrial education provided "by the Department of Industries. One or two features of these courses deserve "remark:—

'The fundamental principle, for instance, that workshop training is to be conducted on 'business lines absolutely precludes an apprentice from continuing his general education after 'he has once entered the workshop. He may brush up his knowledge in special evening classes, 'but he has no time during the day to improve his general standard of education. It follows 'therefore that a pupil must at the time of obtaining his Industrial School-leaving certificate 'have carried his general education as far as he is ever going to take it.

'The application of the further principle that both general literary and industrial edu- 'cation should be continuous from start to finish introduces other limitations. To provide for 'the continuation of a pupil's general education during the earlier stages of his industrial 'course the 'practice' stage may be taken either as a full-time course for two years, a half- 'time course for four years or any equivalent combination. If any portion is half-time, the 'other half of his time is available for general education or any other purpose. If a pupil is 'entered as a full-timer at the beginning, his general education is interrupted and finished for 'good. But in the best possible case, by entering as a half-timer, he gets four years half-time 'in which to complete his education. This period allows him time to rise from the fourth 'standard to the fourth form by the abbreviated course, but that is the maximum possible and 'it therefore follows that unless a pupil has already reached at least the fourth standard before 'admission to the industrial school he cannot possibly qualify as a craftsman. It is important 'for school managers to bear in mind the importance of securing the highest possible standard of general education before admission, if the higher kind of training is to be attempted.

'It is further to be noted that the craftsman's certificate constitutes a dual qualification '—theoretical and practical. The two courses may be taken independently subject to the 'condition that no certificate will be awarded for a theoretical course unless the candidate has 'also satisfied the examiner on the practical side.'

Office Note.

29. The main object of this paragraph is to exhort managers to choose candidates who have already received the highest general education qualification necessary, as during the course of practical training it may not be possible to find time for such instruction. The other matters in this paragraph are already elsewhere referred to. It is submitted that the following may be substituted for this paragraph as giving the substance of what is aimed at :—

A very necessary exhortation.
P.R.—4-7-15.

A | "The rigour of workshop training may not admit of a pupil's continuing his general education after he has once entered that course. In the practice stage also, unless he is a half-timer, he will be confronted with similar difficulty. It is therefore necessary for school managers to bear in mind the importance of securing the highest possible standard of general education before admission especially if the higher kind of training is to be attempted, and it is also obvious that unless a pupil has already reached at least the fourth standard before admission to the industrial school he cannot possibly qualify as a craftsman."

Secretary's Note.

I would make no change.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

The pith of this, viz., the exhortation to admit pupils with the highest educational qualification, has been incorporated in the revised paragraph 24. There is, however, no objection in retaining the modified form above 'A'. It explains the reasons for the exhortations.

C.R.—11-10-15.

See note on page 36 supra.

C. G. TODHUNTER—13-10-15.

"34. In addition to the regular or complete courses of industrial education the "scheme defined in this Code also provides for special classes: classes that form no "part of a regular course of instruction, to which admission is unrestricted and for "which no certificates are awarded. These special classes are arranged as required "and are more fully described in Part III of this Code."

Office Note.

P.R.—4-7-15. | 30. There is no objection to this paragraph.

S.K.—15-6-15.

C.R.—20-6-15.

PART I.

CHAPTER IV.—INDUSTRIAL INSTITUTIONS.

"35. Industrial institutions providing regular or complete courses of industrial "education are of three kinds—

"(i) Government trade schools.

"(ii) Government industrial schools leased to private bodies for working.

"(iii) Private industrial schools.

"Besides which there are non-classified schools providing only special courses of "instruction.

"Since leased Government schools are identical in every respect except owner-"ship with private schools the two may be treated as one class."

Office Note.

31. In this classification, Mr. Tressler has only taken into consideration those institutions which are already in existence or about the starting of which *he* has some idea. He has entirely omitted to take account of those which are likely to crop up in the near future. For instance, there are some proposals from certain local bodies, e.g., Negapatam, to start industrial schools under their management. Such institutions will not find any possibility of classification here. It is therefore submitted that some heading should be opened to include them also; schools under the management of the Government or local bodies may form one class. It may be noted here that paragraph 40 of Part II of the Code refers to schools under *public* management, *i.e.*, under the management of the Government or local bodies.

The classification "Government trade schools", by which are referred only those which provide theoretical training for the "craftsman's" course, is none the least exhaustive of all *Government* industrial schools. In opening this classification Mr. Tressler had before him the proposed Government Madras Trades school, which is intended to train apprentices. He has not taken into account the Madura Technical school and the Cocanada Mechanical Engineering school, which are to be managed by the Government. These schools will not follow purely the apprentice system as by their situation they cannot command private workshops to give practical training to apprentices and as, in consequence of this, separate workshops will be attached to the schools themselves.

A Further there seems to be no necessity to open any separate heading for "Government Industrial schools leased to private bodies for working." This distinction is not with any significance. At the close of this paragraph it is clearly stated that leased Government schools are identical with private schools; and in paragraph 43 "leased and private-owned" schools are classed as one; and nowhere else in the Code is the distinction maintained. There is therefore no object in opening a separate heading for them. It may signify the policy of the Government in furthering industrial education, but the Code does not seem to be the place for its declaration.

In these circumstances it is submitted that the classification may be as follows:—

(1) Trade schools ... ... { (*a*) Under the management of the Government or local bodies. (*b*) Under private management.

(2) Industrial schools ... ... { (*a*) Under the management of the Government or local bodies. (*b*) Under private management.

If this is approved, the following further alterations may be made in the wording of the Code:—

(*a*) The words "complete" in the first line may be omitted;
(*b*) "Two" may be substituted for "three";
(*c*) The last sentence may also be omitted.

Secretary's Note.

The above criticisms on paragraph 35 should be put to Mr. Tressler and his remarks invited.

P. Rajagopala Achariyar—4-7-15.

[Paragraph 2 of demi-official No. 744-1, Educational, dated 9th July 1915.]

"36. *Government Trade schools.*—The system of training followed is the "apprentice system".

Office Note.

32. The word "Government" in this heading may be dropped, so that the rule may apply to similar schools under other managements also.

Secretary's Note.

This point may also be included in the reference to Mr. Tressler ~~in the previous~~

P.R.—4-7-15

[Paragraph 2 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

Paragraphs 35 and 36.—Schools established by local bodies are, as observed, omitted in the classification and it is not quite clear to me whether they ought to be put in. A trade school is really extension class where no manufacture is undertaken. An Industrial school is one in which manufacture is done. I do not think that local bodies or private schools ought to be allowed to undertake trade instruction. In any case, I should bar private schools providing trade instruction. As to local bodies, whether they ought to be allowed to open trade schools or not depends on whether they can be relied on to carry out the spirit of our policy or not. I rather doubt if they can but am open to conviction on the point and if Government consider that local bodies ought to be allowed to open trade schools, the proposed classification may stand except that there should be no provision for trade schools under private management.

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NOTES TO G.O. 164, EDUCATIONAL, 15TH FEBRUARY 1917.

It is rightly remarked that the Madura Technical school does not fall under this head but the Madura Technical school is or is going to be a technological institution and therefore falls under that class.

Why I differentiate between a Government Trade school leased to private bodies and a private industrial school is that the one is owned by Government and the other is not. I am of opinion that this distinction is sufficient to warrant special classification.

Further Office Note.

Please see notes on pages 38 and 44 supra.

37/38

Trade Schools.—Mr. Tressler's reason as to why local bodies and private agencies should not be permitted to establish trade schools, viz, that they cannot be relied upon to carry out the spirit of the policy of the department is not very clear. The principal feature of *trade* schools is that pupils belonging to them will acquire practical training in an outside workshop or factory as apprentices in those factories while receiving theoretical instruction in the school itself. The proposed Madras Trades school is to have its students apprenticed only to firms and workshops under private management. It may not be impossible for local bodies and private agencies also to make similar arrangements with private factory owners and establish trade classes. This question has apparently to be settled in view of possible developments. It is therefore for orders whether Mr. Tressler's classification of trade schools should be modified as proposed.

Industrial schools.—As regards these it is submitted that Mr. Tressler's classification does not provide for such schools maintained by the Government or local bodies. In his reply to the reference, he does not say anything about *industrial* schools managed by local bodies. It is very likely that such schools will sooner or later come into existence; and he has no specific objection to urge against these bodies maintaining the institutions.

Mr. Tressler does not also say definitely whether there will not be *industrial* schools managed by the Government. Two schools, viz., the Madura Institute and the proposed Mechanical Engineering school at Cocanada were cited as examples of Government Industrial schools. In his reply he does not refer to the Cocanada school. Apparently as stated by him elsewhere he anticipates the establishment of a school at Cocanada by some *private* agency. But as regards the Madura institute, the only Government institution in the mufassal, he states that this is, or is going to be a technological institution. It is submitted that this statement is not altogether consistent with what has been stated in other places in the Code and in the Government Orders sanctioning the reorganization of the institute. Paragraph 11 of Part I of the Code states that no technological education will be undertaken by the Department of Industries except with regard to dyeing and leather industry. Of these, the Leather school is located at Madras. As regards dyeing the Government sanctioned the establishment of classes in the Madura Institute under Dr. Marsden. But recently Mr. Tressler has stated that the classes in Madura did not attract students and that therefore they should be opened at Madras. Mr. Tressler has also suggested that in Madura *industrial* classes in dyeing need alone be opened. If these proposals are approved neither of the technological classes in dyeing and leather industry will be located in Madura. Further, according to the orders issued in G.O. No. 647, Educational, dated the 18th July 1912 and No. 725, Educational, dated the 8th August 1913, the institute at Madura when reorganized will provide instruction in weaving, dyeing, mechnical engineering, carpentry and smithy in the industrial grade, i.e., of the elementary type. It is not therefore clear why Mr. Tressler states that the institute is to be only a technological school. According to him a techonlogical institution should be of the type of the Victoria Technical Institute, Bombay. He himself has pointed out that the establishment of such an institution in this Presidency would be a very costly business and that therefore students who wish to

G.O. 647, 18th July 1912.

G.O. 725, 8th August 1913.

Paragraph 4 of G.O. 725, 8th August 1913.

undergo higher training should be sent to the Bombay institute. It may therefore be assumed that there is no near prospect of developing the Madura institute into a technological institution. The Madura institute will therefore be mainly an *industrial* school. In these circumstances it appears to be necessary to include *industrial* schools managed by Government also in the classification in paragraph 35 of the Code.

It is also for orders whether the *classification* "Government industrial schools leased to private bodies for working" should be retained. Please see note at **A** on page 38 *supra*. The fact that the Government own the building does not admittedly alter the character and working of the institution so far as the Code is concerned.

C.R.—11-10-15.

Chapter IV may be cut out bodily. It fulfils no essential purpose of a Code and consists largely of an attempt to classify institutions some of which have not yet been sanctioned while others have not yet come into existence. The proposed Madras Trade school, which apparently forms the basis of the main portion of this chapter, is still under consideration. The scheme of leasing out Government Industrial schools to private bodies still remains undecided.

Nor is the attempt at classification by any means successful. It assumes that Trade schools will all be Government institutions and attempts without any apparent reason to separate Government Industrial schools which are leased to private bodies from schools which are the property of such bodies. The bulk of the matter is covered by other portions of the Code. Clauses (*c*) and (*d*) of paragraph 38 are possible exceptions. They can be dealt with under Part II.

C. G. TODHUNTER—25-10-15.

"37. *Regular courses.*—The only course of instruction ordinarily provided in a "trade school in connection with the regular courses of industrial education is the "course of theoretical training forming part of the craftsman's course. These "theoretical courses are shown in Part III, paragraph 29."

Office Note.

P.R.—4-7-15. | 33. There seems to be no objection to this paragraph.

S.K.—15-6-15.

C.R.—20-6-15.

"38. *Admission.*—The conditions for admission are as follows:—

"(*a*) Pupils from Industrial schools who wish to attend a course of theoretical "training must apply to the Inspector and produce an Industrial School-leaving certifi-"cate. The Inspector will then try to arrange for their apprenticeship for the time "that they are undergoing instruction and if this is possible the pupils will be "admitted.

"(*b*) Candidates who have not studied in Industrial schools must produce a "certificate from an employer stating that they are actually engaged in the trade in "which they desire instruction.

"(*c*) Candidates must not be under 16 years of age.

"(*d*) Candidates must produce a letter of recommendation from the manager "of the Industrial school last attended, or from their present employers.

"(*e*) Candidates must adduce evidence to show that they have attained at least "the fourth form standard of general education. If even so, their literary attainments "are found to be deficient they may be required to attend a course of general instruc-"tion up to that standard before admission to the theoretical course."

Office Note.

34. The rules herein have been framed only in regard to *Government* schools. They do not seem to be open to any objection and also appear to be applicable to schools under local or private managements also. In clause (*a*) the word "Inspector" is used to render the rule applicable to Government schools only. In order to extend its application it seems better to substitute the word "management" for it. With this modification this paragraph may be approved.

Secretary's Note.

I would ask Mr. Tressler about this.

P. RAJAGOPALA ACHARIYAR—4-7-15.

[Paragraph 3 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

38. The modification is accepted.

"39. *Fees and stipends.*—In the first instance no fees will be levied for the "theoretical course. Except in the eventuality mentioned in Part III, paragraph 14, "no stipends will be awarded by Government."

Office Note.

35. The statement in this paragraph that no fees will be levied from the pupils is apparently based on the orders in the case of the Madura Technical Institute where classes as distinguished from technical classes are to be levied. In the case of the North Madras Technical school * no fees are to be levied. There seems therefore this sentence; but it may be limited to schools under Government management as it is proposed to make the paragraphs in this chapter applicable generally to all schools.

G.O. 647, Educational, 18th July 1912.

it has been decided that no fees for *industrial*

* Only an admission fee is to be levied—paragraph 9 of Committee's report.

P.R.—4-7-15.

to be no objection to the retention of

The answer of Mr. Tressler to the reference at pages 31 and 32 would settle this.

P.R.—4-7-15.

As regards the question of stipends it was originally decided in connection with the Madura Technical Institute that in order to induce students to join industrial classes some stipend should be awarded.

Paragraph 7, page 34 of G.O. 647, Educational, 18th July 1912.

In the case of the North Madras Technical School a similar decision was also come to; but subsequently on the representation of labour employers this form of inducement was replaced by partial free boarding and lodging, only a proportionate recovery from their earnings being made. All these proposals were considered by the conference which was convened to work out details in regard to the North Madras Technical school. After discussion the conference has recommended that neither stipends nor hostel accommodation should be granted but that scholarships alone should be awarded in deserving cases. The statement in this paragraph follows the above recommendation. There seems to be no objection to accept this recommendation for the present. If any alteration in this decision is considered necessary later on, it may be introduced.

Please see Mr. Tressler's letter on pages 2 to 4 of G.O. 780, Educational, 4th July 1914.

P.R.—4-7-15.

Quite so.

P.R.—4-7-15.

If the above is approved, the words "in schools under the management of Government" may be introduced at the close of the first sentence of this paragraph.

"40. *Scholarships.*—Specially deserving candidates who would without financial "assistance be unable to continue their practical training may, on the recommendation "of their employers and at the discretion of the Director of Industries, be given "scholarships of the value of Rs. 5 per mensem.

"Forms of application for admission to trade schools (Appendix XXI) and "for scholarships (Appendix XXV) may be obtained on application to the In- "spector of Industrial Schools. Applications for scholarships must be received duly "filled up before 1st April of each year and for admission to the school before 1st "May.

"The number of scholarships available will be notified about the middle of March "in the *Fort St. George Gazette*. Scholarships will be awarded by the Inspector of "Industrial Schools on the merits of the applicants."

Office Note.

36. The only alterations that seem to be needed in this paragraph is the insertion of the word "*Government*" before "trade schools" in the second sub-paragraph, as the application form for *other* trade schools, if they are established, need not be supplied by the Inspector of Industrial Schools.

P.R.—4-7-15.

As regards the value of the scholarship which is proposed to be fixed at Rs. 5, it is submitted that according to the present scholarships notification for industrial schools the rate varies from Rs. 1-8-0 in standard C to Rs. 9 in the advanced course. As these classifications of periods of training will now be replaced by new ones, there seems to be no objection to accepting the rate of Rs. 5 for trade school scholarships. The notification will eventually have to be revised with reference to the decisions in connection with the code.

P.R.—4-7-15.

Yes.

P.R.—4-7-15.

Further Office Note.

Perhaps the words "of the value of Rs. 5 per mensem" at the end of the first sub-paragraph may be omitted. At present, the number and value of scholarships tenable in industrial schools are notified in the *Fort St. George Gazette* is in the case with scholarships tenable in ordinary non-industrial schools. In the code, Mr. Tressler has proposed a new scheme of scholarships for trade schools and for industrial schools. His Excellency the Governor has directed that every reference to proposals which have not yet received the approval of Government should be omitted from the code. Reference to the new scheme of scholarships may therefore be omitted. If the new courses of studies outlined in the code are approved, Mr. Tressler may be asked to submit separately proposals for the modification of the existing scheme of scholarships. As at present, the scholarship notification published every year may give particulars about the scholarships available in industrial and trade schools. It need not be embodied in the code. The Madras Educational Rules do not furnish particulars about the number and value of scholarships available in the schools coming under the purview of those rules.

C R.—11-10-15.

"41. *Examination.*—At the end of each course a written and oral examination "will be held covering the ground defined in the syllabus. No (craftsman's) certificate "will however be awarded unless candidates also hold or obtain a journeyman's "certificate."

Office Note.

37. The second sentence of this paragraph already occurs in paragraphs 30 and 31 of this part. It is therefore unnecessary here.

Secretary's Note.

I see no harm in the repetition.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

If the suggestion to delete paragraph 30 is approved, the second sentence in the above paragraph may perhaps be retained.

C.R.—11-10-15.

"42. *Special classes.*—In addition to the regular courses of instruction popular "lectures or special classes for artisans will also be provided as required (*vide* "Part III)."

Office Note.

38. This also seems needless as the same has been stated in paragraph 34.

Secretary's Note.

I would leave it alone.

P. RAJAGOPALA ACHARIYAR—4-7-15.

"43. *Industrial schools* (*leased or private-owned*).—The training in these schools "will usually be on the 'Industrial school system,' but managers may with the previ- "ous sanction of the Director of Industries admit apprentices direct to the workshop "section of certain branches.

"The general rules applying to these schools are laid down in the next part."

Office Note.

It depends on Mr. Tressler's answer to the reference proposed at page ~~74~~.

P.R.—4-7-15.

39. The words "leased or private owned" may be omitted, so that this paragraph may be applicable to State and local bodies schools also.

S.K.—15-6-15.

C.R.—20-6-15.

PART II—INDUSTRIAL EDUCATION.

Conditions for State Aid to Private Institutions.

Office Note.

40. This part contains specific rules relating to the organization, recognition and aid to industrial schools and accordingly takes the place, so far as these schools are concerned, of the Madras Educational Rules and the Grant-in-Aid Code. As has already been pointed out, the arrangement of matter in this part does not seem to be all that can be desired. The portions relating to the conditions under which grants should be paid and the basis on which they should be calculated should ordinarily be kept distinctly separate from the rules relating to recognition and other matters connected with the working of the schools which have their counterpart in the Madras Educational Rules. Without largely dislocating the arrangement it may be better if chapters I and V of this part are kept together and taken to the end of the part, the remaining chapters II, III and IV forming together the earlier portion of it.

I would rather make no change.
P.R.—4-7-15.

The Educational Rules and the Grant-in-Aid Code, so far as they relate to secondary schools, have been adopted in the present Code for industrial schools. There seems to be no objection to this course. Mr. Tressler has however used for this purpose the old editions of the Educational Rules and the Grant-in-Aid Code, which do not embody subsequent amendments thereof. In dealing with the individual chapters below, it will be indicated where the modified rules have to be adopted. Mr. Tressler has also left out all provisions for the payment of grants in respect of endowments and gymnasia and games. It will be pointed out in the appropriate places below how far provision for these is also necessary in the Code.

Chapters II, III and IV will be taken up first for examination and then chapters I and V.

S.K.—15-6-15.
C.R.—20-6-15.

The proposal that the portion borrowed from the Educational Rules, as to the establishment of schools, should precede the portion from the Grant-in-Aid Code seems to be sound. But I don't see the use of borrowing chapters bodily and then making trifling and unnecessary changes I would acknowledge the borrowing and emphasise the essential differences. For instance I would commence chapter II with "The general rules governing industrial schools are the Educational Rules for "secondary schools for boys which are reproduced with some slight modifications below. The changes are shown in italics."

C. G. Todhunter—20-10-15.

PART II.

CHAPTER II.—GENERAL RULES FOR INDUSTRIAL SCHOOLS.

"12. The recognition of industrial schools shall vest in the Director who "shall, before according recognition, satisfy himself as to, besides the other matters "specified in this chapter, the following :—

"(*a*) The character of the teaching, the organization and development of "the school.

"(*b*) The educational needs of the locality.

"(*c*) The financial stability of the school.

"(*d*) The constitution of the managing body.

"(*e*) The scale of fees charged as compared with those charged in other "institutions in the same locality.

"13. *Proportion of intructors to pupils.*—There should be an instructor for every "subject taught in the practice stage and another instructor, ranking as a foreman for "each subject taught in the workshop stage."

Office Note.

41. The former follows rule 22 of the Madras Educational Rules; but the latter is new. There seems to be no objection to these.

P.R.—4-7-15.
S.K.—15-6-15.
C.R.—20-6-15.

"14. In the practice stage if the number of pupils on the rolls for any "subject exceeds 30, the subject must be divided into sections, each in charge of an "instructor. If the number again exceed 30 a further sub-division must be made.

"In theoretical classes the numerical limit is 20."

Office Note.

42. Ordinarily the numerical limit of pupils is placed with reference to each class. Here, however, the subject is mentioned. It is not known whether within the limit specified here one instructor can have under him number of students of various grades such as practice, workshop, theoretical, etc., though under the same subject. As the qualifications of teachers are separate with respect to each of these grades it is not likely that the above would have been intended. If not there seems to be no objection to substitute the word "class" for "subject." In each grade there must be different classes according as they are of the first, second or third year in their course. In order to avoid any ambiguity it seems better to specify on what basis the numerical limit is intended to be fixed.

S K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

I would leave it alone.

P. RAJAGOPALA ACHARIYAR—4-7-15.

See page ~~85~~ Rules 13 and 14 seem to belong to "organization."

C. G. TODHUNTER—25-10-15.

"15. *Site, plan and accommodation.*—No school shall be recognized which is "held in a building or buildings of which the site, plan and accommodation have not "been approved by the Director. When the accommodation is added to, the plan of "the additional building must be submitted for the approval of the same authority.

"The plans for all machinery or plant to be permanently erected shall similarly "be submitted for approval.

"16. The plan of a school building and of any additions to such building shall "give full information regarding the superficial and cubic space of the building and "of each room in it. It shall also show the exact positions of doors, windows, stairs, "etc. The plan shall be certified correct by the person who has prepared it. The "plan of an old building submitted for purposes of recognition shall also be accom-"panied by a certificate from the person who has prepared it to the effect that the "building is in a state of good repair.

"17. The plan may be prepared by any competent person. Managers who "require the services of an officer of the Public Works Department should apply to "the Executive Engineer of the district, or, in the Presidency town, to the Consult-"ing Architect [*Note A, page 82*]."

Office Note.

43. These follow rules 30 to 32 of the Madras Educational Rules. In G.O. No. 371, Educational, dated the 2nd April 1914, some verbal alterations were introduced in these rules. They are—

(i) the substitution of the words "dimensional sketch" for the word "plan" where it first occurs in these rules and the word "sketch" wherever it appears subsequently;

(ii) the replacement of the word "require" by "desire" in rule 17; and

(iii) the omission of the words "district, or, in the Presidency town, to the "Consulting Architect" and the introduction of the word "division" in their place.

These alterations were introduced in connection with some difficulties which arose in the working of the rules. It was found that the word "plans" was frequently taken to mean "elaborate designs," etc., while what was actually required for the purpose of recognition was only a rough sketch. The other alterations were also needed for obvious reasons. It is submitted that these alterations may be introduced in the above paragraphs of the Code.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15

"18. *Dimensions of buildings.*—The dimensions of the buildings shall be such as "to provide at least 8 square feet of area and 80 cubic feet of space for each pupil on "the rolls. In calculating the dimensions of buildings under this rule, verandahs "which are solidly constructed and on which class rooms open may be included.

"19. If any school has a dormitory intended for the accommodation of ten or more "pupils attached to it, the dimensions of such dormitory shall be such as to provide "at least 30 superficial feet and 400 cubic feet for each pupil. In the case of dormi- "tories intended for less than ten pupils a proportionate increase in superficial and "cubic space for every inmate less than ten up to at least 80 superficial feet and 900 "cubic feet for a single pupil shall be provided.

"20. *Sanitary inspection.*—Every school building shall be maintained in "substantial repair and in a cleanly condition. It shall be subject to inspection by "the departmental inspecting officer, and such officers of the Medical, Sanitary and "Engineering Departments as Government may direct.

"21. The following sanitary certificates shall be produced before recognition is "accorded and on any subsequent occasion if called for: in the Presidency town a "certificate signed by the Sanitary Commissioner, the Deputy Sanitary Commissioner, "a District Surgeon, or the Health Officer of the municipality: in the mufassal a "certificate signed by the District Medical Officer or, if satisfactory reasons are "given, by a subordinate Medical Officer [*Note C, page* 83].

"22. *Overcrowding of class-rooms.*—No class room, laboratory, or workshop "shall be permanently used as such by a larger number of pupils than the Inspector "or Sanitary Officer has declared it sufficient to accommodate. The dimensions of "each room shall be clearly indicated on the wall thereof.

"23. *Latrine.*—Every school shall be provided with a suitable latrine.

"24. *Protection from small-pox.*—The presence of pupils unprotected from "small-pox may be regarded as a sufficient cause for withdrawal of recognition.

"25. *Furniture, Apparatus and Appliances.*—Every school shall be provided "with the furniture, apparatus and appliances declared by the inspecting officer to "be necessary for the standard of instruction up to which it teaches."

Office Note.

44. These are exact reproductions of rules 33 (i), 33 (ii), 34, 35, 36, 37, 37 (A) and 38 of the Educational rules with the exception that in paragraph 25 the words "and with the gymnastic apparatus prescribed in Appendix J" have been omitted. Mr. Tressler apparently does not consider it necessary that industrial schools which in most cases include within their working manual labour also should compulsorily provide for gymnasia and games. Though there may be some schools in which theory alone is taught, yet the students attending those classes will be mostly apprentices who will be attached to workshops. Compulsory provision of gymnasium does not therefore seem to be necessary, and schools may be left to provide or not for it as they choose. In this view the paragraphs above indicated may be accepted.

Cf. Rule 38 of Madras Educational Rules.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

"26. For every payment of fees a pupil shall receive a receipt signed and dated "by the manager or some one deputed by him. The receipt should show the class in "which the pupil is reading."

Office Note.

P.R.—4-7-15. | 45. This follows rule 42 of the Educational Rules and may be accepted.
S.K.—15-6-15.
C.R.—20-6-15.

"27. *Admission and withdrawal of pupils.*—No pupil who has previously studied "in any recognized industrial school shall be admitted to another industrial school, "unless he presents a transfer certificate in the prescribed form (Appendix I) from "that school. No pupil shall be allowed to attend school pending formal admission "or enrolment, and no pupil shall be admitted or enrolled pending the production of "an industrial school transfer certificate if due. If the pupil is alleged not to have "attended any industrial school previously, an ordinary school transfer certificate may "be accepted: if he is alleged not to have attended any school at all, the manager of "the industrial school must prepare a declaration stating that, to the best of his "knowledge, the pupil has received no previous education of any kind. All transfer "certificates and declarations shall be endorsed with the admission number under "which the pupil is enrolled. They shall be separately filed and shall be shown to "the inspecting officer when required."

Office Note.

46. This paragraph with the exception of the portion enclosed in brackets is almost the same as rule 44 of the Educational Rules. There seems to be no objection to this paragraph so far as it goes.

P.R.—4-7-15.

It is, however, submitted that no provision is made for prescribing a formal application for admission newly into an industrial school similar to the one in rule 43 of the Educational Rules. The paragraph above (27) lays down that in such cases an ordinary school transfer certificate may be accepted, but there should be an application from the candidate for admission into the school or from his parent or guardian preferably the latter as the minimum age of the pupils seeking admission into industrial classes is ten. In this connection it is noted that in the case of technological courses, trade school and normal training school such applications are prescribed. Please see paragraphs 18 and 40 of Part I, paragraph 43 of Part III, and Appendices XX to XXII. If approved, the following may be introduced as a new paragraph above paragraph 27 or added as the first portion of it:—

Paragraph 47 of Part II of the Code, page 21.

Pages 5, 12 and 45 of the Code.

P.R.—4-7-15.

"No pupil shall be newly admitted in any industrial school except on an application in the prescribed form signed by his parent or guardian and, if he is a major, by himself."

S.K.—15-6-15.
C.R.—20-6-15.

I would add, as in the Educational Rules,—"all such letters of application shall be filed separately in the records of the school."

C. G. Todhunter—25-10-15.

"28. If a pupil is permitted to enter the workshop direct, without previous "industrial training, the sanctioning order (chapter III, paragraph 49) must be filed "with the pupil's transfer certificate. Application for a transfer certificate shall be "made in writing by the parent or guardian of the pupil.

"29. The manager of the school into which a pupil seeks admission shall not "apply for a certificate to the manager of the school which such pupil is leaving, but "shall leave it to the parent or guardian of the pupil to apply for such certificate.

"30. The manager of the school into which a pupil is admitted shall place him "in the class for which he is found fit, subject to revision by the inspector.

"31. Before granting a transfer certificate the manager is entitled to claim the "term fee for one term only and that the term in which the last attendance of the "pupil is registered.

"32. If a pupil is found to have obtained admission by means of a false certifi- "cate or false representatians of any kind, he shall be summarily dismissed with "forfeiture of whatever fees he may have paid."

Office Note.

P.R.—4-7-15.

47. These follow rules 45, 46, 47, 48 and 57 of the Madras Educational Rules respectively. These may be accepted.

In the Educational Rules there are some further elaborate rules regarding grant of transfer certificates, laying down detailed instructions as to the payment of fees, etc. It may not be necessary to insist on their being imported in the Industrial Code for the present and until the practical working demonstrates their necessity. It however seems desirable to introduce in the Industrial Code some such provision as in rule 56 of the Educational Rules. The latter rule runs as follows:—

E.g. rules 49, 50, 51 and 52 of the Madras Educational Rules.

In the event of the headmaster's refusing or delaying to give a transfer certificate, the parent or guardian of the pupil shall have the right of appeal to the inspector whose decision shall be final unless he thinks it necessary to refer the matter to the Director.

It is submitted that with the substitution of the word "manager" for "headmaster" the above rule may also be inserted in the Code.

P.R.—4-7-15.

S.K.—15-6-15.
C.R.—20-6-15.

The first part of rule 28 is a repetition of chapter III, rule 49, and has nothing to do with the second part. It may be omitted.

Rule 30.—There is no reason given for omitting the second part of Educational rule 47, which may be included.

C. G. Todhunter—25-10-15.

"33. In the event of a pupil being formally expelled on account of grave mis-
"conduct, the manager shall record his reasons for the dismissal or expulsion and
"report the fact at once to the parent or guardian of the pupil and within seven days
"to the inspector. A pupil thus dismissed or expelled from one school shall not be
"admitted into any recognized school within a period to be determined by the Director
"on the inspector's recommendation.

"34. When a pupil is dismissed or expelled the manager shall not grant a
"transfer certificate until the expiration of the period for which the Director has
"debarred the pupil from admission into a recognized school. After that period has
"expired the transfer certificate shall be granted subject to the above rules; but in
"such cases the headmaster shall endorse it with the words 'dismissed for false
"representation,' or 'expelled for misconduct,' as the case may be.

"35. *Discipline.*—The rules of discipline shall include the following:—

"(*a*) Every pupil shall in the workshop and the class room wear a neat and
"suitable dress and, in all cases where good manners require it, a suitable covering
"for the head.

"(*b*) No pupil shall be allowed to sit in a class room with his shoes on, unless
"they are shoes of an English pattern and unless socks and trousers are worn also.
"But in plague-infected areas shoes of an English pattern together with socks may
"be worn in class even if trousers are not worn.

"(*c*) Every pupil shall salute the instructors on the occasion of his first meeting
"them for the day within the school precincts.

"(*d*) On the instructor's entering a class room the pupils shall rise and remain
"standing till they are desired to sit or till the instructor takes his seat.

"(*e*) No pupil shall be allowed to leave the workshop or class-room without
"the permission of his instructor, or until work has been stopped."

Office Note.

48. These follow rules 58, 54 and 59 of the Educational Rules respectively and may be accepted.

S.K.—15-6-15.

C.R.—20-6-15.

P.R.—4-7-15.

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"36. *Registers and returns.*—Every school shall keep books in the prescribed "form and submit to the inspecting officer, when required, the following:—

"(1) A register of admissions and withdrawals (Appendices II and III).
"(2) Attendance registers for pupils (Appendix IV.)
"(3) A term fee register (Appendix V) (if fees are charged).
"(4) A time-table.
"(5) A register of attendance for staff (Appendix VI).
"(6) An acquittance roll (Appendix VII).
"(7) A log-book, being a record of all events of importance connected with "the school.
"(8) A register of scholarships (Appendix VIII).

"*Attendance registers.*—Separate registers shall be maintained in each subject as "follows:—

"(*a*) For pupils in the practice section. In this register "half" and "whole timers" "must be separated. Recognized and non-recognized pupils must also be differentiated.
"(*b*) For recognized apprentices in the workshop section.
"(*c*) For recognized apprentices attending the theoretical courses.
"(*d*) For paid workmen in the workshop.

"*Returns.*—Accounts for the workshop section must be kept entirely separate "from those for the rest of the school. For the school as a whole the following returns "are required:—

"(1) Schedule of stipends (Appendix IX).
"(2) Schedule of staff qualifications and pay [Appendices X (*a*) and X (*b*)].
"(3) Financial statement (Appendix XI).
"(4) Statistical return (Appendix XII).

"In the workshop section complete working accounts are to be maintained on "any commercial system approved by the Director.

"All returns must be submitted not later than April 15th."

Office Note.

49. The first portion of this follows rule 60 of the Educational Rules and the latter is special to industrial schools and therefore new. In the first portion provision for a visitors' book in each school has been left out. It seems desirable to insist on its being kept in industrial schools. While they are considered necessary in the case of the ordinary schools their necessity in the case of industrial schools is greater. If approved, a new item may be introduced as item (9)—

Please see note to rule 60 (i) of the Madras Educational Rules.

"A visitors' book" in which officials belonging to other departments and other visitors to the school may be invited to make remarks.

P.R.—4-7-15.

The latter portion of this paragraph is intended to ensure the maintenance of separate and correct accounts of workshop and the school proper. This has been urged by Mr. Tressler ever since he took charge of the department. Please see his notes on pages 14 and 15 of G.O. No. 833, Educational, dated the 16th July 1914. This paragraph may be approved.

P.R.—4-7-15.

S.K.—15-6-15.
C.R.—20-6-15.

The Educational Rules should be followed strictly as far as they go. The paragraph regarding attendance registers may stand. The so-called returns are really accounts. I don't see the necessity for them. They are probably covered by the forms under the Madras Educational Rules. Workshop accounting is going to be part of the course of training and should be dealt with in its proper place.

C. G. TODHUNTER—25-10-15.

"37. *Withdrawal and renewal of recognition.*—When a school or any of its "classes has ceased to fulfil the conditions of recognition, or when the educa- "tional needs of the locality no longer require its existence, the Director shall "withdraw the privilege of recognition from that school or class..

"38. A school or class, from which the privilege of recognition has been with- "drawn, owing to its having ceased to fulfil the conditions, shall not be restored to that "privilege, until it has been certified by the inspector that the defects which led to "the withdrawal of recognition have been remedied, and that in all other respects the "school or class fulfils the prescribed conditions.

"39. If a recognized school ceases to exist or is transferred to a different locality "or different managing body its recognition lapses and for the purpose of future "recognition it shall be treated as a new school.

"40. Courses of instruction may be prescribed from time to time for all re- "cognized industrial schools, whether under public or private management."

Office Note.

50. These are adaptations of rules 63, 64, 65 and 67 of the Educational Rules. The only point that has to be noted in this connection is about the expression "public management" in paragraph 40. This is the first time this occurs in the Code. In the Educational Rules institutions under public management are defined as those under the management of the Government, local board or municipality. Mr. Tressler has, as already pointed out, not taken any consideration in this code of institutions under local boards and municipalities and no definition such as that which occurs in the Educational rules has been introduced here. It therefore seems better to substitute for the words "public or private management" the words "the management of the Government, local, or private bodies."

Rule 1 of the Madras Educational Rules.

Mr. Tressler may be asked about this.

P.R.—4-7-15.

S. K.—15-6-15.

C. K.—20-6-15.

[Paragraph 5 of Demi-Official, No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

40. The alteration may be made.

Secretary's Note.

Rules 61 and 62 of the Madras Educational Rules must be reproduced or else the reference to "any of its classes" in rule 37 above will be meaningless.

In rule 40 I would omit the words after "schools".

C. G. TODHUNTER—25-10-15.

PART II.

CHAPTER III.—GENERAL RULES REGARDING ORGANIZATION, MANAGEMENT AND STAFF.

"41. The organization of the school shall be as follows:—

"The institution shall be in charge of a manager who shall be an individual "of sufficient general education and administrative experience to qualify for such a "post.

"The management of the workshop shall be in the hands of a superintendent "who shall be an individual qualified by practical industrial experience of modern "manufacturing methods and a thorough practical knowledge of his trade or craft.

"An adequate clerical staff is also to be maintained as prescribed by the "Inspector.

"Instructors shall be provided in the proportion laid down in Chapter II, "paragraphs 13 and 14 and must hold instructor's certificates of the required grade.

"42. When a superintendent possesses the dual qualifications necessary for "manager and superintendent, he shall be competent to exercise both functions, and "even when the two appointments are separated, the superintendent shall have "unhampered control of the practical side of the work."

Office Note.

51. The only point that needs notice in these paragraphs is the prescription of qualifications for the manager of an industrial school. It is unusual to prescribe qualifications for managers of schools and accordingly the Educational rules are silent on that point. In his original note Mr. Tressler stated that the manager should be a person competent to hold charge of the commercial side of the institution, to control accounts and to decide all business questions. Apparently Mr. Tressler refers in the code to a paid head of the whole institution and not to the "management" which may either be a body of persons like the local body or a private committee. If so, there seems to be no objection to the retention of these paragraphs.

Paragraph (8), page 15 of G.O. 833, Educational 16th July 1915.

May be retained.
P.R.—4-7—15.

There was a long discussion at the meeting of one of the committees as regards the relative position of the manager and the superintendent in an institution and the last sentence of paragraph 42 that "the superintendent shall have unhampered control of the practical side of the work" is the result. It was pointed out at the meeting by Mr. Tressler that the managers were responsible for the general control of the schools but were not entitled to interfere in the question of practical training of the students which was the province of the superintendents. It cannot even now be said whether there will not be a clash between these two officers. The rule may be allowed as it is for the present to be amended if necessity arises in the future.

P.R.—4-7-15.

Further Office Note.

It is not proposed to approve Mr. Tresslers's proposal to establish a normal training school. As, according to his scheme, the instruction received in that school is the standard by which the grade of teacher will be determined, it is necessary to lay down some other standard for the teachers. Mr. Tressler has been asked to report whether a scheme of apprenticeship cannot be instituted. The reply to that reference may perhaps be awaited.

In the meanwhile it may perhaps be better to say that the "instructors must hold certificates approved by the Director."

C.R.—11-10-15.

Follow the Madras Educational Rules.—"The instructors should either be of "proved ability or should hold certificates approved by the Director."

"Without the sanction of the Director the strengh of a class in the workshop "section shall not continuously exceed 30, or 20 if it is a class for theoretical "instruction."

There should be one instructor for every class. Each instructor of a class in the practice stage should be assisted by a foreman.

The above may follow the portions marked **A**. I don't think it is necessary to make any rule about the clerical staff.

C. G. Todhunter—25-10-15.

"43. *Courses.*—The various courses of instruction are shown in Part III, "Chapter III. Drawing for a period of not more than three hours a week forms an "integral part of the practical course in the practice section and is not therefore "specifically mentioned."

Office Note.

52. This paragraph seems unnecessary here. The second sentence may be carried over to paragraph 29 of Part III which lays down the courses of studies.

Secretary's Note.

I would leave it alone.

P. Rajagopala Achariyar—4-7-15.

The office proposals may be accepted.

C.G.T.—25-10-15.

"*Time* (*Practical course*).

"44. *Industrial school system.*—In the practice section a minimum of 16 hours "a week must be devoted to practical industrial work (including drawing). A pupil "devoting this minimum time to industrial work will be termed a 'half-timer.' "Pupils devoting a minimum of 32 hours weekly to industrial work will be termed 'full-timers.' To the practice section both half and full-timers may be admitted; "in the workshop section full time is compulsory but will include such time as may "be devoted to 'recognized' theoretical instruction.

"45. The full period of training in the practice section is two full-time years. "The period may however, at option, be lengthened to 4 half time-years or the "equivalent. The full period of training in the workshop section is given in Part "III—usually 3 years. Any proposed increase or decrease in the specified period of "training in the case of any pupil or apprentice must receive the sanction of the 'Director of Industries. If such sanction is refused the pupil or apprentice may be "retained at option as a paid workman in the workshop, but he is not then 'recog-"nized' and his name may not be included in the official register of apprentices.

"46. *Apprentice system.*—Where schools are permitted to admit apprentices "direct into the workshop without previous school training, the period of training is "that specified in Part III, Chapter III, in connection with the apprentice system. "In this case apprentices must be full-timers."

Office Note.

P.R.—4-7-15.

53. Submitted that these paragraphs may be accepted. In his original note Mr. Tressler suggested 36 hours for a full-timer and 16 hours for half-timer. The period of training laid down here is also very nearly the same as that in the original note.

Paragraph (11), page 16 of G.O. 833, Educational, 16th July 1914.

S.K.—15-6-15.
C.R.—20-6-15.

We agreed that the half-timer would take 11 years to complete his course. I don't think he is a practicable proposition. I would amend as below. This still allows the Director a lot of latitude.

Rule 44.—*For* 16 *substitute* 32 and omit all but the first sentence.

Rule 45.—*For* the first three sentences substitute :—

"The full period of training in the practice section is two years and in the workshop section usually three years" and omit "he is not then recognized and" in the last two lines.

Rule 46.—Omit the last sentence.

C. G. TODHUNTER—25-10-15.

"*Conditions for Admission.*

"47. *Practical courses—Industrial school system—Practice section.*—The "minimum age for admission to industrial schools is 10 years.

"No educational qualification is prescribed for admission.

"After the first year of training it will be possible to form a good idea of the "capacity of a pupil and whether he will be likely to shape well or become a failure. "As an industrial school is not a refuge for the destitute or incapable, but a training "ground for efficient workmen, pupils who at the end of their first year show no "prospect of becoming efficient workmen must be removed from the register.

"The practice section is intended primarily for the training of pupils wishing "to adopt an industrial career. The introduction into this section of pupils who do "not fulfil the half-time condition, or are undergoing training with an obviously "non-industrial object is viewed with disfavour, but will not for the present be "absolutely stopped provided that the Director's sanction is obtained for their admis-"sion and their names are entered in a separate register and entirely omitted from "all returns.

"The enumeration of such pupils as industrial will be regarded as a grave "breach of regulations involving the instant withdrawal of the privilege of the "admission of such pupils to the industrial classes."

Office Note.

54. As regards the minimum age for admission it has been fixed at 10. It is submitted that the full period of training in the practice section is two full-time years and four half-time years. In the next paragraph the minimum age for admission to the workshop section is laid down as 14 years; so a pupil who joins the industrial school at the age of 10, if he is a full-timer, will have to wait for additional two years though he might have completed his "practice" section; and the rule as it stands will only be fit for half-timers; entering the practice section at the age of 10 with a four years' half-time course they will be eligible for admission to the workshop section at the 14th year. Either the minimum age must be varied for full-timers or the minimum for workshop section must be lowered or the minimum for the practice section must be raised to 12 years. In his original note also the minimum age for the workshop section was suggested as 15 as it was thought that the boys should not work as operatives under factory conditions below that age. It may not therefore be possible to reduce the minimum age for workshop. Mr. Tressler may be asked to note further on this point.

Paragraph 45 of the Code, Part II.

Page 9 of G.O. 833, Educational, 16th July 1914.

Mr. Tressler may be asked about this.
P.R.—4–7–15.

In the third sub-paragraph the first sentence and the first portion of the second sentence may be omitted as being unnecessary. The full force of what is intended is conveyed by the remaining words, namely, "pupils who at the end of their first year show no prospect of becoming efficient workmen must be ermoved from the register."

A

I consider them necessary.
P.R.—4–7–15.

No change need be mada here.
P.R.—4–7–15.

In the fourth sub-paragraph, third line, the words "at least" may be inserted between "who do not" and "fulfil the half-time condition."

Yes.
P.R.—4–7–15.

S.K.—15–6–15.
C.R.—20–6–15.

[Paragraph 6 of demi-official No. 744–2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

Paragraph 47.—My opinion is that pupils under the age of 14 should not do whole-time courses and therefore the minimum age for admission to the workshop has been fixed at 14. If a boy joins the practice section at the age of 10 he must do half-time: if at 12 he does two half-time years and one full-time year, joining the factory at the age of 15, etc. I may not have made this clear and it might be well to state at the end of the paragraph:—

"No pupils in the practice section may be put on to whole-time work until "they reach the age of 14."

Further Office Note.

The addition suggested may be approved.

2. The alteration in the third sub-paragraph suggested at "A" ~~on previous page~~ is also for orders.

above

C.R.—11–10–15.

I would say—

"The minimum age of admission to an industrial school is 12 years. No "educational qualification is prescribed for admission"

and omit the *brutum fulmen* which follows.

C. G. Todhunter—25–10–15.

54

"48. *Workshop section.*—The minimum age for admission into the workshop "section is 14 years.

"The qualification ordinarily prescribed for admission into the workshop section "is the industrial school-leaving certificate.

"Under the industrial school system, schools are at liberty to admit any pupil "satisfying the above qualifying conditions, but, without the special sanction of the "Inspector, no pupil who fails to satisfy those conditions shall be admitted to the "workshop section. The object of the education given in the workshop section is to "train workmen, not to provide a course of manual training for individuals intending "to qualify in some other direction. The introduction of pupils who are *primâ facie* "non-industrial or do not fulfil the whole-time conditions into the workshop, will be "regarded as a grave breach of regulations, involving the instant withdrawal of "recognition from the school."

Office Note.

I would leave it alone.
P.R.—4-7-15.

55. In the third sub-paragraph the portion from "Under the industrial school system" to "but" may be omitted as being unnecessary.

As regards the last portion of this paragraph laying down that the introduction of non-industrial pupils into the workshop would involve the withdrawal of recognition, it is submitted that objection was taken to it by the Hon'ble Mr. M. Ramachandra Rao at the meeting of the committee. In regard to the practice section, paragraph 47 allows the introduction of non-industrial pupils with the special sanction of the Director. Their absolute prohibition in the workshop section is stated by Mr. Tressler to be necessary to prevent the waste which would follow from industrial schools admitting and training pupils who had no intention of following industrial pursuits but took the course with some other object in view. It is not likely that persons would ever resort to workshop and seek training there for other than industrial objects and it will not be improbable that everybody who seeks admission will assert his taking an industrial course eventually. It is not therefore clear how *primâ facie* non-industrial pupils could be distinguished from others.

I quite agree.
P.R.—4-7-15.

I would support Mr. Tressler and maintain the last sub-paragraph of paragraph 48. It will not in practice be difficult to work.
P.R.—4-7-15.

Further Office Note.

It is for orders whether the following may be substituted for the third sub-paragraph :—

"Without the special sanction of the Inspector, no pupil who fails to satisfy "these conditions shall be admitted to the workshop section. The introduction of "pupils who do not fulfil whole-time conditions into the workshop will be regarded "as a grave breach of the regulations."

C.R.—11-10-15.

I would omit the whole of the third paragraph.
C. G. Todhunter—25-10-15.

"49. *Apprentice system—Workshop stage.*—Schools may be permitted to admit "apprentices direct to the workshop stage in certain subjects, but every such admis-"sion must be individually sanctioned by the Inspector.

"In the application for sanction (which must be made by the manager) the "reasons for omitting the practice stage must be fully explained and the previous "industrial career of the applicant set forth. The sanctioning order, if obtained, "must be filed for reference with the school transfer certificates and declarations "(Chapter II, paragraph 28).

"50. All apprentices who prove unsatisfactory are to be removed from the "official registers as soon as possible, though they may, at the option of the "manager, be retained as paid workmen.

"Every apprentice will be paid according to a schedule prepared by the manager. "Payment may be on a time or work basis at option, but must be proportionate to "outturn.

"51. *Theoretical courses.*—No apprentice may be admitted to the theoretical "courses unless he has obtained the craft qualification certificate (4th Form) and holds "an Industrial School-leaving certificate. In the case of apprentices admitted direct "into the workshop, the second qualification will not be required, but in all cases "admission to these classes will be subject to the approval, in writing, of the Inspector "and, in general, admission will be refused to all individuals who have not shown "marked ability."

Office Note.

P.R.—4-7-15. | 56. These paragraphs do not seem to be open to any objection.

Further Office Note.

For the words underlined in paragraph 51 above, the following may be substituted:—

"unless he possesses the requisite general educational qualification."

C.R.—11-10-15.

Rule 49. Omit "be permitted to," "in certain subjects," "individually," "(which must be made by the manager)," "if obtained."

Rule 50. After the word "unsatisfactory" add the words "as such."

C. G. Todhunter—25-10-15.

"52. *Fees and stipends.*—Schools should levy fees, if possible. If this is done, "they must be levied on a uniform scale.

"It is recognized that some form of stipend is usually necessary to induce pupils "to attend an industrial school. Stipends should ordinarily be confined to the prac- "tice section. In the workshop section a pupil must be encouraged to earn his living "and no assistance must be given to apprentices. Stipends may, however, in special "cases, be given to apprentices attending theoretical courses.

"Stipends, if given, must be given on uniform scales in each class, but deduc- "tions may be made for such part of the cost of a pupil's board and lodging as may "be regarded as properly debitable to industrial education. If, for instance, this "portion is estimated to be Rs. 2 per mensem and a pupil also gets 8 annas per "mensem pocket money, his stipend is Rs. 2-8-0 and must be so shown. In this "case, outside pupils attending the school must be paid Rs. 2-8-0 in cash.

"A schedule of stipends in the form given in Appendix IX is to be submitted annually. As laid down in paragraph 47 *ante* stipends paid to pupils not *bonâ fide* "industrial must be omitted from the statement."

Office Note.

57. In the first sub-paragraph the words "on a uniform scale" seem to be indefinite. It is not known what is meant whether the rate should be the same for all subjects in which theoretical instruction is given or whether the rate in all schools should be the same, apparently the former. It seems however to be necessary to make the point clear.

I think it is alright.
P.R.—4-7-15.

It is submitted that the first sentence of the second sub-paragraph may be omitted. This general statement does not seem to be quite consistent with what is stated in paragraph 39 of Part I and paragraph 14 of Part III. In that case the second sentence may begin with the words "Where stipends are given they should" and the word "stipends" may be omitted.

P.R.—4-7-15.

In the third sub-paragraph, first sentence, the words "where hostel accommodation is provided" may be inserted between the words "but" and "deductions."

P.R.—4-7-15.

The other portions of this paragraph may be accepted.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

I agree except as to the last sentence which may be omitted.

C. G. Todhunter.—25-10-15.

"53. *Scholarships.*—The rules regarding scholarships are given in Part III, "Chapter II."

Office Note.

58. Ordinarily this paragraph seems superfluous.

Secretary's Note.

Leave it alone please.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Please see further note below paragraph 54.

C.R.—11-10-15.

"54. *Attendance and dismissal.*—Pupils must be regular in attendance. "Repeated lateness, idleness, absence from class, as well as absence without "leave, renders pupils liable to dismissal. In the case of pupils holding scholarships, "leave up to seven days at a time and not exceeding 15 days in the year may be granted "by the manager. Absence for a longer period may be sanctioned by the manager, "but must be reported to the Inspector who has the right of stopping the scholarship "allowance if he is not satisfied that the reasons adduced are adequate.

"Absence for a month or more *ipso facto* leads to the lapse of the scholarship. "All such cases, as well as the dismissal of scholarship-holders, must immediately be "brought to the notice of the Inspector for orders."

Office Note.

Yes.

P.R.—4-7-15.

59. The word "lateness" may be replaced by the words "late attendance."

It would seem appropriate that reference to scholarships and the conditions of their grant should come under the special chapter in Part III which deals with them.

I would make no change.

P.R.—4-7-15.

It seems to be invidious that scholarships under theoretical courses alone should be dealt with under that head, while under the other courses no such references are made. If this is agreed to, these may be added to paragraphs 22 to 26 of Part III. As regards to merits of this rule, the power to grant casual leave provided here is the same as that in the existing Scholarships Notification for technical schools. As regards longer leave the present notification empowers the grant of one month's leave on account of illness without forfeiture of scholarship and of leave for longer periods also in which case no allowance will be granted for the excess period. This does not lead to the lapse of the scholarships but only to the temporary stoppage of payment for the excess period of absence. The draft code declares that the absence for a month leads to the lapse of the scholarship. This seems to be too drastic. It is therefore for consideration whether the existing provision cannot be introduced here. Even otherwise the words "*ipso facto*" in the first sentence of this sub-paragraph does not seem to be consistent with the submission of such cases to the Inspector "for orders." Where the rule operates *ipso facto* there is no need "for orders." Probably such cases can only be submitted for imformation.

I do not think so.

P.R.—4-7-15.

I would leave it alone.

P.R.—4-7-15.

Further Office Note.

If the suggestion to omit all references to the new scheme of scholarships (*vide* note under paragraph 40 of Part I) is accepted, paragraph 53 and paragraph 54, except the first two sentences, may be omitted. The scholarship notification will deal with all these matters.

C.R.—11-10-15.

Secretary's Note.

Approved.

C. G. TODHUNTER—25-10-15.

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"55. *Examinations.*—A promotion examination shall be held annually, on the "strength of which promotions will be made. The examination results must be "sent to the Inspector as soon as possible. If any extraordinary promotions are "made these should be brought to the notice of the Inspector for approval.

"56. *Certificates.*—The rules regarding certificate examinations are given in Part "III, Chapter I."

Office Note.

60. These do not call for any remarks except that paragraph 56 may be taken to be unnecessary.

S.K.—15—6–15.
C.K.—20–6–15.

Secretary's Note.

I would leave it alone.

P. Rajagopala Achariyar—4–7–15.

I think I would omit paragraph 56 as we are trying to get rid of everything superfluous.

C. G. Todhunter—25–10–15.

"57. *Special classes.*—Ordinarily schools will only be permitted to provide "the regular courses of industrial training, *i.e.*, up to the Industrial school-leaving "certificate, journeyman or craftsman standard. In particularly well-equipped and "managed schools permission may be accorded for the introduction of the special "classes detailed in part III, chapter IV."

Office Note.

61. With reference to paragraph 10 of chapter I and the note on page 18 *supra*, the first sentence of this paragraph may be omitted as it is suggested therein that this restriction as to the agency is needless.

87

S.K.—15–6–15.
C.R.—20–6–15.

Secretary's Note.

I would make no change. The word "ordinarily" gives sufficient elasticity.

P.R.—4–7–15.

PART II.

Chapter IV.—Conditions for Recognition.

"58. In order to qualify for aid, schools must be recognized. Application for "recognition must be made on the form shown in Appendix XIII.

"To secure recognition :—

"(i) The general rules and conditions for recognition and aid must be satisfied.
"(ii) The manager and superintendent must be individually recognized.
"(iii) The instruction staff must hold the required instructor's certificates and must "be of the number prescribed in chapter I, paragraphs 13 and 14.
"(iv) The courses of instruction must be recognized.
"(v) The number of pupils must be not less than the minimum prescribed."

Office Note.

I would leave it alone.
P.R.—4–7–15.

62. The first sentence seems to be out of place here as it occurs in the right place in paragraph 8 of this part under conditions for aid.

The words "and aid" may be omitted.
P.R.—4–7–15.

In the first item laying down conditions for recognition, it seems to be better to omit the words "and aid." Recognition precedes aid generally and it is not necessary that every recognised institution should be aided.

Further Office Note.

In item (iii) above, the words "the required instructor's certificates" may be modified into "the approved certificates" with reference to note under paragraph 41 (Chapter III of this part).

C.R.—11–10–15.

58

Secretary's Note.

For the second sub-paragraph substitute "Recognition involves approval of manager and superintendent, instructing staff, courses of instruction and number of pupils."

C. G. TODHUNTER—30-10-15.

"59. For purposes of recognition each stage—the practice, workshop and "theoretical—is treated as a separate unit and is to be separately recognized. "Recognition to the theoretical stage implies recognition in the workshop and practice "stages: recognition to the workshop stage implies recognition in the practice stage.

"The general rules for recognition and aid have already been explained in "Chapters I and II."

Office Note.

63. The last sentence of this paragraph may be omitted.

S.K.—15-6-15.
C.R.—~~15~~ 6-15.

Secretary's Note.

I see no harm in it. It may remain.

P. RAJAGOPALA ACHARIYAR—4-7-15.

The first and second sentences are contradictory as they stand. The third is unnecessary. Substitute—

"The lower stage must always be recognised first before recognition is extended to the higher. Thus there can be no recognition in the workshop stage till the practice stage has been recognised or in the theoretical classes till the workshop stage has been recognised."

C.G.T.—30-10-15.

"60. *Recognition of Managers and Superintendents.*—The qualifications "required for these posts have already been generally explained in Chapter III, "paragraph 41 and no hard and fast rules can be laid down. The decision as to "whether an individual does or does not satisfy these conditions must rest with the "Director. [It is to be noted, however, that an individual recognized as capable of "managing any one school is not necessarily recognized as capable of managing "any other or even the same school under different conditions. Accordingly,] "whenever there is an increase or upward change in the subjects taught in "a school, or when a manager or superintendent is transferred from one school to "another he must be recognized afresh. Application for recognition in these "appointments must be accompanied by a general statement regarding the applicants' "qualifications and training. If the Director from this statement, from personal "knowledge or from further enquiry, is satisfied that the applicant is qualified for "the appointment, he will grant a certificate of recognition subject to the limitations "explained."

Office Note.

64. Please see note under paragraph 41. No further remarks seem called for here.

Secretary's Note.

The paragraph needs no change.

P.R.—4-7-15.

Further Office Note.

The portion enclosed in brackets may be omitted.

C.R.—11-10-15.

Substitute—

"Recognition of managers and superintendents is at the discretion of the Director and is good only for institutions and subjects in respect of which recognition has been given. Every application for such recognition must be accompanied by a full statement of the applicant's qualification and training. Whenever a substantial change in the course of teaching is made or a manager or superintendent is transferred to another institution, a fresh application for recognition must be made.

C.G.T.—30-10-15.

"61. *Instructors.*—All instructors will be required to possess instructor's "certificates. The certificate required for charge of the practice section is the III "class or higher: for charge of the workshop section, II class or higher. To teach "a subject in the theoretical stage an instructor must hold a I class certificate. In "certain subjects the Director may give permission for a III class instructor to have "charge of the workshop section.

"Instructors must hold a certificate for the subjects which they supervise. "Drawing must be taught by a qualified drawing master."

Office Note.

65. The only point that requires notice here is about the word "qualified" used before the words "drawing master". It is not known under what test the drawing master is to be qualified. It is nowhere laid down in this code nor in the Educational Rules. Apparently a pass in the Government Technical Examination in drawing is meant. If so, it would be better to specify it.

Mr. Tressler may be asked about it.
P.R.—4-7-15.

[Paragraph 7 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

61. The qualification I require in a Drawing master is not that obtained by passing the Government Technical Examinations. I want a man with some practical mechanical knowledge of what he is doing and should therefore prefer to leave the question of qualification open. If, however, the term is to be defined I persume it will be necessary to specify the Government Technical Examination in Drawing, but subject to the condition that the Inspector is satisfied with the man's practical attainments. This condition again introduces a vague term; but I do not see how it can be avoided. Drawing masters will be one of my difficulties and I do not see how I can accept them, merely because they have passed the examination.

Further Office Note.

In view of Mr. Tressler's remarks, paragraph 61 may {perhaps remain as it is.
S.K.—11-10-15.

In the absence of a normal school and consequent issue of separte certificates of different grades, it seems advisable to omit all references to various grades of certificates in the first sub-paragraph. For the present, the qualifications of instructors will have to be approved by the Director in each case. If so, the first subparagraph may be amended as follows:—

"Instructors to teach particular sections and particular subjects should hold certificates approved by the Director for the purpose."

C.R.—11-10-15.

I agree, but would alter the wording slightly.

Applications for recognition of instructors, including drawing masters, must show their qualifications and training and the subjects which they are employed to teach. Recognition will be at the discretion of the Director.

C. G. Todhunter—30-10-15.

"62. *Courses.*—Each subject must be recognized up to one of the recognized "stages—the practice, workshop or theoretical stage. No stage will be recognized "unless the instructor therein is duly qualified to hold charge.

"The theoretical stage may, however, be recognized even if there is no qualified "I class instructor provided, if the Director regards the manager or superintendent as "competent to impart theoretical instruction in the subjects for which recognition is "sought.

"A school will therefore be recognized in the following manner, e.g.—

"Fitter work	... ...	Theoretical stage.
"Weaving	... ...	Workshop stage.
"Metal work	... ...	Practice (School-leaving certificate stage).

"No subjects other than those recognized may be taught in an industrial school."

Office Note.

P.R.—4-7-15. | 66. This does not seem to call for any remarks.

Further Office Note.

The words "I class" may be omitted.

C.R.—11-10-15.

Only subjects in respect of which a school is recognized should be taught. Recognition will depend primarily on the qualifications of the manager, superintendent and instructors to teach the subject in question. A subject may be recognized as far as the practice, workshop or theoretical stage.

C. G. Todhunter—30-10-15.

"63. *Numbers.*—For recognition to the theoretical stage the minimum number of "recognized pupils must be 30 in that subject.

"For recognition up to the workshop stage, the minimum number is 25.

"For recognition up to the practice stage the minimum number is 15.

"The minimum number of pupils altogether in a school must be 30."

Office Note.

67. The minimum number of pupils for recognition to the theoretical stage is fixed as 30. Under paragraph 14 the numerical limit for each teacher in a theoretical class is 20. It would thus appear that for theoretical classes there must at the start be two instructors and without that the class will not be recognized. This does not seem to be the intention. It must be possible to recognise a class with at least one teacher. If so the figure "30" may be altered into "20". For the same reason the minimum number of pupils altogether in a school which is put down as 30 should be altered into 20 where theoretical stage alone in a school in one subject is recognized.

Secretary's Note.

Mr. Tressler may be asked about this.

P. Rajagopala Achariyar—4-7-15.

[Paragraph 8 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

63. The figures 30 and 25 may be altered to 20.

Further Office Note.

Please see office note above. There is no necessity to change the figure 25 into 20.

S.K.—11-10-15.

C.R.—11-10-15.

I think we want more elasticity. *Substitute*—

"A second condition is that there should be not less than a minimum number of recognized pupils. This is fixed at 30 for a school as a whole and 15 for any one stage of instruction."

C.G.T.—30-10-15.

"64. *Special conditions for recognition in the higher stages.*—Schools will not be "recognized up to the theoretical stage unless they have been permitted to introduce "the general educational course leading up to the craft qualification certificate or can "show that they have other recognized facilities for educating pupils up to this stand-"ard (4th form). *Percontra* schools will not be permitted to introduce these general "educational courses unless the staff and general arrangements of the school appear "to the Director to be adequate and suitable for purposes of theoretical instruction.

"Recognition up to the workshop stage will be conditional on the maintenance "of proper workshop accounts and on these accounts, if not actually showing a profit, "at least bearing testimony to a business-like and commercial system of manufacture. "If these conditions are not fulfilled, recognition in the workshop stage will be with-"drawn though schools may, if they wish, continue to run their workshop on their own "lines provided that none of the rules contained in this code are infringed thereby."

Office Note.

68. It seems to be hard that every recognition up to the theoretical stage should be subject to the requirement regarding the provision for general education. In some cases such a provision may not be necessary and in others it may be admissible to insist on such provision. All that is required seems to be that students with general educational qualification lower than the minimum prescribed should not be allowed to attend theoretical classes. Some latitude should, it is submitted, be left to the management in this matter. The second sentence of this paragraph may be allowed. So also the second sub-paragraph.

Secretary's Note.

The latitude is with the Director of Industries and it is best with him. I would make no change.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

The whole of the first sub-paragraph may be omitted with reference to the notes under paragraph 24 of part I.

The heading may be altered into "Special conditions for recognition in the workshop stage."

C.R.—11-10-15.

Approved. This rule should be placed before No. 63.

C. G. TODHUNTER—30-10-15.

"65. *Counting of pupils.*—A part of the teaching grant to schools is based on the "number of pupils in the various stages. It has already been laid down that separate "registers shall be maintained for the school and workshop sections and that recogni-"zed pupils shall be entered separately from paid workmen and all other non-recogni-"zed workers."

Office Note.

Paragraphs 73, 36 and 45 of Part II of the Code.

69. The whole of this paragraph seems to be unnecessary as the same matter is referred to in other places.

Secretary's Note.

I would leave it alone.

P.R.A.—4-7-15.

Further Office Note.

As, with reference to His Excellency's note on page 5 supra, the system of grant proposed by Mr. Tressler is not to be approved at present this paragraph may perhaps be omitted.

C.R.—11-10-15.

Omit.

C.G.T.—30-10-15.

"66. *A recognized pupil* in any stage is one who has satisfied the conditions for "admission to that stage and has not been under training in that stage for a period in "excess of that prescribed and further satisfies the conditions regarding time and "admission (*vide* paragraphs 44–51). [Only recognized pupils may be counted and "for purposes of grant, a half-time pupil in the practice stage counts as half a "pupil.]

"In the case of apprentices taking the theoretical course, the time thus spent may "be included in the time prescribed for whole-time practical work, but the inspector "has the right of insisting on a pupil leaving the theoretical classes and devoting "himself entirely to practical work if he considers that the apprentice will not benefit "by the theoretical training afforded.

"If a pupil attends two courses (which is only possible in the practice section "under the half-time arrangement) his name shall be entered in black in his main "subject and in every other and he shall only be counted once."

Office Note.

70. It would seem that the first paragraph would more appropriately come under the head "teaching grants" for it relates to the assessment of grant.

It is laid down that pupils remaining in a particular stage in excess of the prescribed period would not count for grant. Under paragraph 45, the increase in the period of training in "the practice" stage should receive the sanction of the Director and where such sanction is refused the pupil will not be a "recognized" one. Thus pupils whose retention is sanctioned by the Director should be considered "recognized" and when recognized they should naturally count for grant; if so, such cases should be provided for in this rule, and the words "or has been retained for such excess period with the approval of the Director" may be inserted after the word "prescribed". In the second sub-paragraph the significance of the word "thus" in the second line is not understood. The point may be made clear. The rest of this paragraph does not call for any remarks.

Secretary's Note.

Mr. Tressler may be asked.

P. RAJAGOPALA ACHARIYAR—4–7–15.

[Paragraph 9 of demi-official No. 744–2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

66. The addition of the words "or has been retained for such excess period with the approval of the Director" may be made as suggested. I do not think the first sub-paragraph should be transferred to the head "Teaching grants"; because although it refers to the assessment of grants, it refers also to the pupils and therefore it must appear in the chapter in which it is placed.

The objection that the meaning of the word "thus" is obscure may perhaps be met by substituting the word "attaining" for "taking" in the first line of the second sub-paragraph.

Further Office Note.

As regards the second paragraph of Mr. Tressler's note above it is submitted that the alteration suggested in the second sub-paragraph so as to bring out the force of the word *thus* does not seem to improve the sense. Perhaps the expression "the time thus spent" means "the time spent in the theoretical course" and if so, the words "the time spent therein" may be substituted for it.

The portion within brackets in the first sub-paragraph may also be omitted.

C.R.—11–10–15.

Substitute—

"A recognized pupil in any stage is one who has satisfied the conditions for admission to that stage and has not continued in it (except with the express permission of the Director) for more than the period of the course laid down. An apprentice taking a workshop or theoretical course may be a recognized pupil.

C. G. TODHUNTER—30–10–15.

64

~~51~~

PART II.

CHAPTER I.—CHARACTER, OBJECTS AND GENERAL CONDITIONS OF AID.

Office Note.

71. The chapter is almost similar to chapters I and II of the existing Grant-in-Aid Code.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Then open the chapter with an explanation of the fact—

"Grants-in-aid to industrial schools are governed as far as possible by the rules of the Grant-in-Aid Code which is applicable to schools in general. The present chapter reproduces chapters I and II of the code with necessary modifications. The modifications are shown in italics."

In typing give wide margins to the portions which are on quotations and when they are printed have them set up in smaller type.

C. G. TODHUNTER—30-10-15.

— —

"1. *Grants-in-aid.*—A sum of money is annually set a part to be expended under "these rules as grants-in-aid of industrial schools leased to or under private manage- "ment with the object of extending and improving industrial education. Such grants "will be given impartially and without reference to any religious instruction to all "schools which impart sound instruction, subject to the conditions hereinafter speci- "fied and with due consideration for the requirements of each locality, and of each "institution, and of the funds available."

Office Note.

72. The words "leased to or" between the words "industrial schools" and "under private management" are newly introduced; they do not appear in the existing code. The addition seems to be unnecessary in the industrial code also as it is not proposed to accept the suggestion to have a separate class of schools called "Government schools leased to private bodies for working." Please see note under paragraph 35 of Part I, page ~~18~~ of notes supra.

I have already noted that the point should be referred to Mr. Tressler.

P.R.—4-7-15.

In the existing code the sentence "these rules do not apply to European schools" appears at the end of this paragraph. Mr. Tressler has omitted this in his draft code. At present it is not likely to have a separate code for *European industrial schools* and the European code for ordinary schools does not contain any provision for industrial schools. The present industrial code may therefore apply to the European industrial schools also that may be opened in the Presidency. Mr. Tressler's action in omitting the sentence in question may therefore be approved.

P.R.—4-7-15.

It may also be noted here that the paragraph does not make any reference to schools under local bodies. This, it is submitted, is correct as such schools do not come within the purview of the Grant-in-Aid Code but are aided by special subsidies sanctioned by the Government.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Reproduce the Code as it stands, omitting the last sentence.

C.G.T.—30-10-15.

"2. *Reservation of discretion by Government.*—The Government reserve to themselves, anything in the rules of this Code notwithstanding, the right to refuse or to withdraw any grant at their entire discretion.

"Grants will ordinarily be withdrawn from a Manager if he or any of the instructors employed by him takes part in political agitation directed against the authority of Government or inculcates opinions tending to excite feelings of political disloyalty or disaffection among the people."

Office Note.

73. For the last word "people" in this paragraph the word "pupils" occurs in the existing Code. The latter word may perhaps be substituted in the paragraph.

S.K.—15-6-15.

C.K.—20-6-15.

Secretary's Note.

"People" includes "pupils." I would make no change.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Reproduce the Code. These subtle changes in the wording of rules on which case law has no doubt grown up are apt to be dangerous.

C. G. TODHUNTER—30-10-15.

"3. *Definitions and terms.*—The term '*Director*' signifies Director of Industries; the term '*Inspector*' signifies the Inspector of Industrial Schools; and the term '*Manager*' includes a board of managers."

Office Note.

74. The existing Grant-in-Aid Code contains definitions about "local boards," "local funds" and "President" besides those in the above paragraph. As that code provides for the payment of grants to schools by local bodies from their own funds the definitions have been put in. The industrial code does not however at present provide for any such grant from local funds and hence no reference to the expressions "local boards," etc. It is submitted that local bodies are not likely to set apart any portion of their revenues towards the payment of grants to industrial schools and the paragraph may be approved as it is.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

There is no reason why a local body should not start an industrial school. Reproduce the code with modifications as above. Properly all these definitions should go into the first chapter of the book.

C.G. TODHUNTER—30-10-15.

"4. *Objects for which aid may be given*—

"(1) Grants are given for teaching.

"(2) Grants are also given for—

"(i) the erection, enlargement and purchase of school buildings and hostels or boarding houses for students attached to educational institutions (building grant);

"(ii) the purchase of school and hostel furniture, apparatus, chemicals, and appliances; of books for school libraries; and of the plant, materials and tools required for laboratories and workshops (furniture grant);

"(iii) the cost of preparing work for exhibitions."

Office Note.

75. Besides the objects mentioned above, the existing code makes provision for the payment of the following grants also :—

Article 4 of the Grant-in-Aid Code.

(*a*) the payment of stipends to teachers under training,

(*b*) the cost of needle-work or other art and industrial exhibitions, and

(*c*) the endowment of professorships, lectureships, teacherships, scholarships, laboratories, workshops, museums and other educational objects.

The reason for omitting the first of these is apparently that according to Mr. Tressler's scheme the training of teachers should be undertaken solely by the State. It has been suggested in the note under paragraph 10 of Part I, page ~~16~~ *supra*, that this proposal should be negatived so as to render it possible to open training schools by other than Government agency also. It is therefore necessary to make provision for the payment of stipendiary grants and item (*a*) above may be inserted in the paragraph.

Paragraph 10 of Part I of the Code.

I would, for the present, accept the position that the training of teachers will be a Government business.

P.R.—4-7-15.

Again, Mr. Tressler provides for the payment of grants towards the cost of *preparing work* for exhibitions. The present code provides for grants towards the cost of *holding* industrial exhibitions. It appears to be necessary to retain the latter in the industrial code. The South Indian Athletic Association has applied for a grant towards the industrial exhibition which they hold in Christmas and similar applications may be received from other quarters. In order to provide for these cases sub-clause (2) (iii) of the paragraph may run as follows :—

I think it sufficient to provide in the Code for "preparing work." The "holding" of exhibitions is a larger affair and may be treated as a special matter outside the Code.

P.R.—4-7-15.

"The cost of industrial exhibitions and of preparing work for such exhibitions."

Mr. Tressler may be asked about this.

P.R.—4-7-15.

It also seems to be necessary to make provision as in the existing code for the payment of grants towards endowments. The following clause may be added as sub-clause (2) (iv) :—

"the endowment of scholarships, laboratories, workshops, museums and other industrial objects of educational value."

Attention is in this connection invited to G.O. No. 551, Educational, dated the 8th August 1911, from which it will be seen that there had been considerable agitation in respect of grants for endowments.

S.K—15-6-15.

C.R—~~11-10~~-15.

[Paragraph 4 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

4. I have no objection to the addition of the clause proposed.

Secretary's Note.

Reproduce the Code as it stands.

C. G. TODHUNTER—30-10-15.

Office Note.

Before going to the next paragraph it has to be noted that Mr. Tressler has left out paragraph 6 of the Grant-in-Aid Code which relates to the authorities for sanctioning the grants. It seems to be desirable to have a similar paragraph in the Industrial Code also especially as a reference to "sanctioning authority" is made in paragraph 6. The following paragraph may therefore be inserted here :—

"Except in cases in which a reference to the Government is required all grants are sanctioned by the Director."

Secretary's Note.

I agree.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Reproduce the Code.

C. G. TODHUNTER—30-10-15.

"5. *Interpretation of rules.*—The interpretation of any rule in this Code shall, "in the first instance, rest with the Director; provided that no interpretation of a "general nature shall be binding on a manager which has not been approved by "Government and notified in the *Fort St. George Gazette.*"

Office Note.

76. This paragraph is the same as the one appearing in the existing Code. The only remark that seems called for about it is that being of a *general* application to all the rules in the draft Code it must naturally appear in Part I of it which deals with general principles. It may perhaps be put at the end of chapter I of Part I which deals with definitions.

P.R—4-7-15.

S.K—15-6-15.

C.R.—20-6-15.

Secretary's Note.

This difficulty will disappear if it is clear that you are only quoting.

C. G. TODHUNTER—30-10-15.

"6. *Appeal to sanctioning authority.*—An appeal shall lie to the sanctioning "authority for the revision of its orders."

Office Note.

77. This is the same as paragraph 8 of the Grant-in-Aid Code and need not be objected to.

P.R.—4-7-15.

"7. *Appendices to have effect of rules.*—The appendices to the Code shall have "the same effect as the rules of the Code and shall be treated as part of the Code."

Office Note.

78. This paragraph too is one of general application and must therefore find a place in the beginning of Part I. It may also be put at the end of chapter I of that part.

Yes.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Let it stand—as a quotation.

C. G. TODHUNTER—30-10-15.

"8. *Control.*—Every institution on behalf of which aid is sought shall be "under the control of one or more persons recognized by the department, who in the "capacity of proprietors, of trustees, or of members of a committee elected by the "society or association by which the institution is maintained, shall undertake to be "answerable for the maintenance of the institution and the fulfilment of all the condi- "tions of recognition and aid including the due enforcement of such rules of disci- "pline as are prescribed from time to time.

"The controlling authority may, with the approval of the department, appoint "a person as correspondent to transact the current business of the institution with "the department.

"Application for change of control of an institution should be made to the "Director. To qualify for aid a school must be recognized."

Office Note.

P.R.—4-7-15. 79. This paragraph is almost the same as paragraph 10 of the Grant-in-Aid Code and may be approved.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Reproduce the Code.

C. G. Todhunter—30-10-15.

"9. *Declaration by the controlling authority.*—Every application for recognition "shall be made in the form shown in Appendix XIII, and shall contain a declara- "tion, signed by the correspondent to the effect that the conditions of recognition and "aid laid down in this Grant-in-Aid Code are being and will continue to be fully "observed, excepting any rules from which the institution may be specially exempted, "and that the management is prepared to subject the institution, together with the "current endowment, and trust accounts; its establishment, time-table and registers, "to inspection, and to furnish such returns as may be required by the department."

Office Note.

80. In this paragraph Mr. Tressler speaks of "application for recognition" while paragraph 11 of the Grant-in-Aid Code refers to "application for aid." According to Mr. Tressler's Code no separate application for *aid* need be submitted. If the school secures recognition it will become eligible for aid. In regard to ordinary schools though they have secured recognition they must apply separately for aid. The only objection to Mr. Tressler's proposal is that a school may seek recognition but may not be in need of Government aid. But Mr. Tressler will apperently aid only those schools which really require Government help. The paragraph may stand as it is for the present. If any alteration is necessary so as to correspond to the provisions of the Grant-in-Aid Code it may be made later on after experience has been gained.

Paragraph 71 of Part II of the Code.

I quite agree.
P.R.—4-7-15.

S.K.—15-6-15.
C.R.—20-6-15.

Secretary's Note.

Reproduce the Code substituting "Technical Education Code" for "Madras "Educational Rules and Grant-in-Aid Code."

C.G.T.—30-10-15.

"10. *Reservation of right regarding the use of books.*—Government reserve to "themselves the right to forbid or to prescribe the use of any book or books in aided "schools."

Office Note.

81. This paragraph is the same as the first sub-paragraph of paragraph 12 of the Grant-in-Aid Code and need not be objected to.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Reproduce the Code.

C. G. TODHUNTER—30-10-15.

Office Note.

Before considering the next paragraph it has to be stated that the Grant-in-Aid Code has a paragraph here as follows:—

Article 13 of the Grant-in-Aid Code.

"*Income to be devoted to educational purposes.*—No aided institution shall be allowed to spend any portion of its income for other than educational purposes."

It is not known why Mr. Tressler has omitted this paragraph. It appears to be necessary to retain this in the Code to prevent diversion of funds of schools for other purposes.

I agree.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

C.G.T.—30-10-15.

"11. *Reservation of right regarding employment of instructor.*—It shall be "competent to the Director of Industries to forbid the employment in aided schools "of any instructor whose certificate has been withdrawn after due enquiry and a fair "hearing have shown him unfit to be an instructor."

Office Note.

82. The similar rule in the Grant-in-Aid Code is as follows:—

Article 14 of the Grant-in-Aid Code.

"It shall be competent to the Director of Public Instruction to forbid the employment in aided colleges and schools of any teacher whose certificate has been withdrawn after due enquiry or who after due enquiry has been considered by him unfit to be a teacher."

The alterations made by Mr. Tressler in the last portion of the paragraph seem to be unnecessary. The rule may, it is submitted, be retained in the Industrial Code as it is in the Grant-in-Aid Code.

I would accept Mr. Tressler's wording.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

Reproduce the Code.

C.G.T.—30-10-15.

Add rule 14-A of the rules unless it has been made quite clear elsewhere that the rules of discipline in the Madras Educational Rules are binding on all industrial schools.

C.G.T.—30-10-15.

Submitted that this has not been introduced anywhere in the new Code; nor do the Educational Rules apply, without specific direction, to industrial schools. Rule 14-A has therefore been inserted in the revised draft. With reference, however, to the last clause of the second sub-paragraph it is submitted that, instead of the disaffiliation under section 24 of the Indian Universities Act, withdrawal of recognition and aid of the school may be substituted.

C.R.—3-11-15.

~~[Paragraph 10 of demi-official No. 744-2, Educational, dated 9th July 1915.]~~

~~*Mr. Tressler's reply to the reference.*~~

PART II.

CHAPTER V.—GRANTS.

"67. *Character and object of aid.*—The character of grants has already been "stated in Chapter II.

"68. *Admission to aid.*—The Director shall determine what institutions shall "be admitted to aid after taking into account the character, the efficiency and the "financial condition of the institutions, the educational needs of the locality and the "funds at his disposal.

"69. *Withdrawal from aid.*—The Director may, after giving due notice, with-"draw aid from an institution, should the financial condition of the institution or the "educational needs of the locality cease to warrant its continuance.

"70. *Penalties.*—The Director may, on the report of the inspecting officer, after "enquiry, withhold, reduce, or suspend the grant on account of falsification of the "registers, or misrepresentation regarding fees, attendance or other matters or "violation of any of the conditions of recognition or aid, or other proved fraud or "irregularity."

Office Note.

83. Paragraph 67 may be omitted as unnecessary and the remaining three paragraphs follow articles 30, 31 and 36 of the Grant-in-Aid Code respectively and may be accepted.

S.K.—15-6-15.

C.R.—20-6-15.

Secretary's Note.

I would make no change.

P. RAJAGOPALA ACHARIYAR—4-7-15.

I think this chapter needs to be entirely recast. *Substitute* ~~for~~ the following:—

"The system of teaching grants in industrial schools follows that for secondary schools in chapter IV of the Grant-in-Aid Code so far as possible. The chapter is reproduced below with changes in italics."

Here copy the chapter with necessary changes except rule 33 for which substitute the rule on page ~~105.~~

C. G. TODHUNTER—30-10-15.

"71. *Application for grants.*—Ordinarily teaching grants will be allotted by the "Director after a scrutiny of the annual returns and without specific application by "the management. All other grants must be applied for. A first application, "stating generally the character and extent of the expenditure on behalf of which "aid is sought, should be submitted not later than January 15 of each year. If "the grant is to be sanctioned during the financial year beginning with the following "April, final revised application must be made not later than April 15."

Office Note.

84. As already pointed out Mr. Tressler's idea is that no specific application for teaching grants is necessary. This principle need not be objected to. The definite significance of the third and fourth sentences of this paragraph is not clear. It is unlikely that the management will be able to forecast all that is needed so early as three months before the beginning of the year. Such requirement is not insisted on in the case of ordinary schools. Apparently Mr. Tressler intends thereby to base his budget allotment on this application. Even for this purpose 15th January is too late. In the case of ordinary schools applications are made at all times during the year and grants are disbursed as funds become available. It will be considered a hardship to preclude schools from applying for grants beyond the 15th January of a year. If this is approved, the third sentence may be omitted. Under each description of grants specific rules prescribing the manner and the date of submission of applications are laid down and the general rule here will be unnecessary and inconvenient. Further it is not known what is meant "by first application." In the case of building grants where the revised rules for ordinary schools are proposed to be adopted, the preliminary application is requisite and no date is prescribed. If it is approved, the fourth sentence will also be unnecessary.

P.R.—4-7-15.

S.K.—15-6-15.

C.R.—20-6-15.

Mr. Tressler may be asked.

P.R.—4-7-15.

71. The third and fourth sentences have been entered because industrial schools now make it a point to apply for grants right at the end of the year. A school is not precluded from receiving grant by not having anticipated requirements in January, but the submission of the first application enables me to deal with the bulk of my grant and know how I stand. Applications have been called for this year on the lines proposed and no objections have been raised whilst an early knowledge of what is likely to be required has enabled me to divide my grant much more fairly than in previous years. A reserve is always kept to meet unforeseen applications but it is argued that expenditure on a large scale can always be anticipated some time ahead. If desired the last paragraph may be modified so as to make it clear that failure to apply does not necessarily preclude a school from obtaining grant, but I consider that it will enormously facilitate dealing with grant allotments if applications are called for early.

Further Office Note.

In view of Mr. Tressler's remarks above, the third and fourth sentences of the paragraph may perhaps be retained for the present.

C.R.—11–10–15.

"72. *Payment of grants.*—(i) Grants for a year may, on or after 1st August of "that year, be drawn on a bill prepared in the prescribed form (Appendices XVI–"XVIII) and countersigned by the Director.

"(ii) On receipt of the countersigned bill the manager shall endorse it and "present it for payment at the nearest treasury. Bills received by the manager during "March shall be cashed before the 15th of that month.

"(iii) Any adjustment which, for any reason, it may be found necessary to "carry out in a grant once paid may be made in the grant for the following year."

Office Note.

85. This follows article 38 of the Grant-in-Aid Code. This paragraph relates only to teaching grants as separate rules regulating the payment of other grants are in existence in this code. The paragraph may therefore go under "Teaching grants." The ordinary code prescribes the countersignature of the *Inspector*. In the case of industrial schools the Director's countersignature is laid down. This may be allowed for the present until experience warrants the substitution of the countersignature of the Inspector.

P.R.—4–7–15.

P.R.—4–7–15.

S.K.—15–6–15.

C.R.—20–6–15.

Teaching Grant.

"73. The Teaching grant is made up of two parts, one based on cost of staff "(staff grant), the other on the number of recognized pupils under training "(capitation grant).

"74. In the schedule of staff (Appendix X) the cost of staff is apportioned out "and on that part properly debitable to industrial education a certain percentage "will be paid as capitation grant. If a school is not recognized beyond the practice "stage in any subject it will draw a staff grant as shown in the appended schedule "and a capitation grant on the number of recognized pupils in that stage at a rate "per head which varies with each subject and is shown in column (*b*) of the "appended schedule.

"If the school is recognized up to the workshop stage in any one subject the "percentage grant on the general staff and on the staff employed in the subject for "which recognition has been accorded up to the workshop stage will be increased by "a further percentage depending on the character of the subject.

"A capitation grant, as given in column (*d*) of the appended schedule, will "also be allowed on all recognized apprentices in the workshop stage. Further, the "capitation grant on pupils in the practice stage will be enhanced as shown in "column (*c*) of the schedule.

"If a school is recognized up to the workshop stage in more than one subject "it may draw the increased percentage on the staffs of each of these subjects but "only once on the general staff.

"75. The basis of the capitation grant is the average number of recognized "pupils or apprentices taken over a period of three years.

"In calculating numbers for capitation purposes in the practice section the "actual totals will be reduced in proportion to the percentage of pupils who fail to "complete their workshop course—due allowance being however made for unavoid-"able wastage. A further reduction is also to be made, determined from previous "returns, on account of pupils who are eliminated during their first year or fail to "complete the school course. Here again, due allowance will be made for unavoid-"able waste.

"A similar reduction will be made for apprentices who fail to qualify.

"76. As a rough guide to the amount of grant the following schedule has been "prepared :—

Staff Grant.

"Staff grant for schools not recognized beyond the practice stage in any subject.

"General staff : $\frac{1}{10}$. Subject staff : $\frac{1}{25}$.

"*Extra* staff grant for schools recognized up to the workshop stage in one or more subjects.

"General staff up to : $\frac{1}{10}$. Subject staff : $\frac{1}{25}$.

Capitation Grant.

Course.	Grant on pupils in practice stage.		Grant on apprentices in workshop stage.
All courses leading up to following craftsman's certificates (*vide* Part III, paragraph 29.)	Grant if subject is recognized in practice stage only.	Extra grant if subject is recognised up to workshop stage.	
(*a*)	(*b*)	(*c*)	(*d*)
Mechanic and Carpenter	5	5	25
All other courses	5	2½	10

"These rates have however only been tentatively fixed and cannot be regarded "as binding since the actual grant allowed by the Director will ultimately be "determined by the sum available for the purpose."

Office Note.

86. No specific basis is *at present* laid down for the fixing of grants for industrial schools. All the circumstances of the school are taken into consideration, and the amount is fixed at the discretion of the Director. In his original note of 1912, the Director discussed in detail the various possible bases for fixing this grant and he came to the conclusion that the grant based on principle of pupils and the staff was the only feasible one. The same is now adopted in the draft code and has been accepted by the committee. There seems to be generally no objection to the adoption of this principle. It is already adopted in the case of elementary schools. The following points are not, however, clear :—

Chapter VI of the Grant-in-Aid Code.

Page 8 of G.O. 833, Educational, 16th July 1912.

I agree.
P.R.—4-7-15.

Article 15 of the Grant-in-Aid Code.

(i) It is not known on what basis the salaries of staff will be debited to industrial education and other objects as required by Appendix X. This forms a preliminary basis on which the proportion of grant is to be determined. It seems to be necessary to definitely lay down what portion of salaries is admissible for the purpose of the grant.

I would rather leave this to the discretion of the Director.
P.R.—4-7-15.

(ii) It is nowhere stated what will be the finanicial effect of the introduction of the new principle in determining the grant and how each typical school will fare under the new scheme.

The whole thing is tentative. Please see the last sub-paragraph.
P.R.—4-7-15.

Mr. Tressler in his covering letter states that teaching grant is intended to be such as to give a minimum to the schools that only provide partial instruction and a maximum to those that turn out finished workmen and that he could not say how the scales proposed would work out in practice. He added that if the schools continued in the existing lines the grant would be much the same as are now. But he however anticipates that schools will change, though he could not say how that will affect the grant. He roughly estimates that the total grant, which would be payable according to the new scale, would not exceed Rs. 60,000 for some time to come, the present provision for teaching grants being Rs. 35,000 in the current year's budget. The above figure seems to be only the ultimate possible liability, as the code itself will be gradually introduced and schools may take time to develop their requirements. In submitting the budget for the current year Mr. Tressler asked for only Rs. 40,000 as the requirement for the current year. It will thus be seen that the ultimate liability of Rs. 60,000 will only be gradually worked up to. There seems to be no use in attempting to get any more definite information on this financial aspect from the Director at present. He himself is not certain about its effects. It is therefore for consideration whether the scheme may be admitted tentatively for the present.

Absolutely none.
P.R.—4-7-15.

It is observed that in paragraph 75 no provision is made for calculating the capitation grant for *new* schools. It is proposed to take the average number of pupils or apprentices for a period of *three* years. It seems to be necessary to lay down what should be the basis for the schools *newly* started.

I would leave this to the discretion of the Director.
P.R.—4-7-15.

These paragraphs do not lay down any rule to regulate the grants payable to schools in the theoretical stage. It is not known why they have been omitted. It seems necessary to include them also in the code. Similarly for technological courses.

S.K.—15-6-15.
C.R.—20-6-15.

Secretary's Note.

Please see paragraph 11 of the Code. The whole policy of Mr. Tressler is to confine attention to "Industrial" education. I would not interfere with this policy for the present.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

In view of His Excellency's note on pages 5 and 6, the Secretary has directed that the system of grants should be as elastic as possible. It may therefore be laid down that grants should be fixed by the Director with reference to the circumstances of each case and after scrutiny of the budget estimate of receipts and charges for the year. His Excellency directs that some "limits" should be laid down within which the Director can assess the grant. Under the existing Code, no such limit is fixed. Perhaps half of the net expenditure may be laid down as the limit. This is *virtually* what is obtained in the case of second-grade schools though further limited by the amount contributed by the management. If in any particular case, a higher rate of grant is, in the opinion of the Director, necessary, he can come up to Government for the special sanction. Such cases should not ordinarily be many in a year. If eventually on experience it is found necessary to alter the system of grant, the Director may address Government separately with facts and figures for altering the Code in this respect. Subject to approval, the following is suggested for substitution to paragraphs 75 to 76:—

Vide rule 44 of the Madras Grant-in-Aid Code.

"The teaching grant for each school will for the present be fixed by the "Director every year on a consideration of the inspection report for the past year, and "the budget for the ensuing one, and the general utility of the school and the amount "contributed from private sources. Provided that no grant shall be given without "the express sanction of Government that amounts to more than half the net cost of "the school after excluding the amount contributed by the management."

C.R.—11-10-15.

C. G. TODHUNTER—30-10-15.

"*Building Grants.*

"77. *Applications for aid*—Applications for building grants must be made in the "prescribed form (Appendix XIV). They shall furnish satisfactory evidence of the "necessity for the erection, or enlargement, or purchase of the building, and shall "be accompanied by a plan and an estimate (prepared by a professional architect or "other competent person) of the cost of the work proposed. If any allotment is "required during the year, applications must reach the Director before April 15.

"78. *Object and proportion of aid.*—(i) Grants not exceeding one-half of the total "cost may be given towards the erection, or enlargement, or purchase of school "buildings and hostels or boarding houses for students attached to educational "institutions, subject to the general conditions laid down regarding accommodation "in Chapter II. Except in the case of hostels or boarding houses attached to educa-"tional institutions, grants shall not be given to provide residences for teachers or "pupils.

"(ii) Grants shall not be given for a building regarding which the Director "has not been consulted and for which aid has not been promised and the plans and "estimates approved previously to its erection, enlargement, or purchase.

"(iii) The amount of grant to be actually disbursed shall be regulated by the "actual cost of the work as finally completed. The grant promised with reference "to the approved plans and estimates will be the maximum that will be paid; but "the amount to be disbursed shall in no case exceed one-half of the actual cost of the "work as finally executed. Before making payment the Director will require the "management to furnish vouchers or certificates showing the actual amount expended "by them in completing the work.

"(iv) Grants shall not generally be given for a building which has not been "completed by the time fixed in the order sanctioning the grant.

"79. *Notice of commencement of work.*—When a grant-in-aid has been promised "in respect of any building, the managment shall, prior to the commencement of "work thereon, give fifteen days' notice in writing to the Executive Engineer in "charge of the division wherein it is proposed to construct the building.

"During the progress of the work, access thereto and every reasonable opportunity "to inspect and examine materials and take measurements shall be afforded by the "management to the officers of the Public Works Department.

"80. *Payment of grant.*—(i) Before the grant is paid it shall be certified in the "prescribed form [note (B), page 82] by the Engineer or other responsible officer "deputed to examine the building, that the work has been completed in accordance "with the approved plan and estimate, or that the building is worth the amount "on which the grant is claimed. Such certificate shall be countersigned by the "Director.

"(ii) Before the grant is paid the owner (or, in cases in which the permission "of the Director has been obtained, the management) may be called upon to execute "a mortgage of the property or a deed of acceptance in respect of the grant, as may "be required. Until further orders the forms of the various deeds shall be as "described in Appendix XXVIII.

"(iii) The grant shall be drawn on a bill prepared in the prescribed form "(Appendix XVII).

"81. *Claims of the Government.*—If a building, for which a grant has been "drawn, has, prior to the lapse of twenty years from the date of payment of the "grant, been diverted to other purposes than educational purposes approved by the "Government, the manager shall refund such portion of the grant as may be "determined by Government. If the manager fail to make such refund, the Govern- "ment may recover the amount by such means as they may think fit to take.

"82. *Grants by whom sanctioned.*—Grants exceeding Rs. 1,000 are sanctioned "by the Government; grants of Rs. 1,000 and under by the Director."

Office Note.

87. As stated in page [illegible] supra, Mr. Tressler has adopted the old set of rules for the purpose. Apparently, he was not aware of the revision carried out in these rules recently and already published. In adopting the old rules he has not introduced any innovation, but merely follows the rules applicable to ordinary school buildings. It is therefore submitted that the revised rules (a copy of which is attached below) * may be substituted for this section. The revised rules provide for grants for extensive alterations and repairs to buildings, for payment of advances, for increasing the period of mortgage of the property to the Government to forty years, etc. The only alteration which Mr. Tressler seems to have intentionally made is the omission of grants for the acquisition of sites for the erection of buildings. There seems to be no reason why this should be done. The provision in the ordinary Code regarding these matters may therefore be restored.

G.O. 370, Educational, 1st May 1912, and G.O. 868, Educational, 22nd July 1914.

* Chapter VIII of the Grant-in-Aid Code.

S.K.—15-6-15.
C.R.—20-6-15.

Secretary's Note.

A reference may be made to Mr. Tressler on paragraph 81 on the lines of the note.

P. RAJAGOPALA ACHARIYAR—4-7-15.

[Paragraph 11 of demi-official No. 744-2, Educational, dated 9th July 1915]

Mr. Tressler's reply to the reference.

Paragraphs 77 to 82.—The paragraphs may be re-arranged in accordance with the revised Grant-in-Aid Code as per enclosed.

Building Grants.

77. *Applications for aid.*—(i) Applications in the prescribed form (Appendix XIV) shall be submitted accompanied by such outline plans as will enable the Director to judge of the suitability of the proposal from an educational point of view. The Director shall inform the correspondent whether he is prepared to consider the question of a grant, making, if necessary, alterations of the plans a condition of his so doing.

(ii) If the Director's reply be favourable the correspondent shall then submit to him, in duplicate, detailed plans, specifications and estimates (which may include architect's and draughtsman's fees) prepared by a professional person. When a grant has been promised in respect of any building, the management shall, prior to the commencement of work thereon, give 15 days' notice in writing to the Executive Engineer in charge of the division wherein it is proposed to construct the building.

(iii) During the progress of the work, access thereto and every reasonable opportunity to inspect and examine materials and take measurements shall be afforded by the management to the officers of the Public Works Department.

78. *Object and proportion of aid.*—(i) Grants may be sanctioned for the following purposes :—

(*a*) Purchasing, erecting or enlarging school houses or buildings or students' hostels including residential quarters for the warden or other staff attached to the hostel.

(*b*) Executing extensive alterations and repairs to buildings which have been newly purchased for school purposes.

(*c*) Acquiring land for school or hostel purposes.

(ii) Grants shall not generally be given for a building which has not been completed by the time fixed in the order sanctioning the grant.

79. *Amount of grant.*—(*a*) The grant promised shall not exceed one-half of the total cost of the work stated in the management's estimates as approved by the Director and modified by the Public Works Department.

(*b*) The amount of grant to be actually disbursed shall be regulated by the actual cost of the work as finally completed. The grant promised with reference to the approved plans and estimates will be the maximum that will be paid, but the amount to be disbursed shall in no case exceed one-half of the actual cost of the work as finally executed. Before making payment the Director will require the management to furnish vouchers or certificates showing the actual amount expended by them in completing the work.

80. *Payment of grant.*—(i) Before the grant is paid it shall be certified in the prescribed form [note (B), page 82] by the Engineer or other responsible officer deputed to examine the building, that the work has been completed in accordance with the approved plan and estimate, or that the building is worth the amount on which the grant is claimed. Such certificate shall be countersigned by the Director.

(ii) Before the grant is paid the owner (or, in cases in which the permission of the Director has been obtained, the management) may be called upon to execute a mortgage of the property or a deed of acceptance in respect of the grant, as may be required. Until further orders the forms of the various deeds shall be as described in Appendix XXVIII.

(iii) The grant shall be drawn on a bill prepared in the prescribed form (Appendix XVII).

80-A. *Conditions of grant.*—(i) In the case of new buildings, extensions or alterations, the Director must have been convinced of their necessity and have approved their character. In the absence of the special permission of the Director or the Government these must not have been commenced before the sanctioning of the grant.

In the case of purchases of land or buildings the Director must either have been consulted before the purchase was made or be convinced that land previously purchased is to be newly devoted to an educational purpose.

(ii) Rooms in school and hostel buildings for the construction of which a grant is sought must be of not less than the following dimensions :—

Dormitories must be large enough to allow, if for a single pupil, 80 superficial feet and 900 cubic feet, if for more than one pupil a proportionately diminishing space down to 30 superficial feet and 400 cubic feet per head for ten or more pupils. A space of at least 8 superficial feet and 80 cubic feet per head should be provided in every room used as a class room, dining room or for any other dwelling purposes other than sleeping.

81. *Claims of the Government.*—If a building, for which a grant has been drawn, has, prior to the lapse of twenty years from the date of payment of the grant, been diverted to other purposes than educational purposes approved by the Government, the manager shall refund such portion of the grant as may be determined by Government. If the manager fail to make such refund, the Government may recover the amount by such means as they may think fit to take.

82. *Grants by whom sanctioned.*—Grants exceeding Rs. 2,500 are sanctioned by the Government ; grants of Rs. 2,500 and under by the Director.

Further Office Note.

Please see page ~~107~~ and draft revised rules on page ~~108~~ and above. In accepting the proposal to adopt the rules in the *existing* Grant-in-Aid Code in regard to building grants, Mr. Tressler has re-arranged those rules and has also left out certain portions. The re-arrangement need not, it is submitted, be objected to. The omissions and alterations are noticed below :—

New rule 77.—This is exactly similar to rule 52 of the Grant-in-Aid Code except the omission of (1) the words "through the Inspector" in sub-paragraph (1) and (2) the following note which occurs at the end of the rule :—

"Any correspondent contemplating building operations for which he desires "a grant from Government should apply to the Inspector for (1) a form of applica- "tion for grant and (2) instructions for the preparation of plans and estimates."

It seems necessary that the applications should come through the Inspector, who will then have an opportunity of scrutinizing it and recording his recommendations thereon.

As the plans and estimates submitted with building grant applications were often found to be very defective the Public Works Department have issued a special circular embodying instructions for their preparation and it was decided that managers of schools should be guided by these in the preparation of plans and estimates. The note was accordingly inserted in the Code—please see G.O. No. 1048, Educational, dated the 17th November 1913. The note seems useful and may be embodied in the Industrial Code also.

New rule 78.—Clause (ii) of this rule does not find a place in the existing Code. It was in the Code before the rules were revised in 1912 but was purposely left out as being unnecessary. The rule prescribing a date for the completion of the building was seldem observed and applications for the extension of the period were numerous and had to be granted as a matter of course. It does not therefore seem to be desirable to retain the rule in the new Code.

New rule 80.—This is similar to rule 53 of the Grant-in-Aid Code with the omission of the words "in full" in the first line and of a clause at the end. This clause runs as follows :—

"Advances may be made from time to time out of the sanctioned grant "provided that the Director is satisfied that the working is proceeding satisfactorily."

This clause was specifically introduced when the rules were revised in 1912. It appears to be desirable to retain it in the new Code also; similarly the words "in full."

With reference to G.O. No. 1290, Educational, dated 16th November 1914, sub-paragraphs (ii) and (iii) of this rule and new rule 79 have been recently altered so as to provide separately for the purchase of buildings and lands. These alterations may be adopted here.

New rule 81.—This is similar to rule 55 of the existing Code. But in the latter, the period of twenty years prescribed as the period during which the building should not be diverted to other purposes has recently been raised to forty. Please see G.O. No. 868, Educational, dated 22nd July 1914. Mr. Tressler does not embody this alteration. It may, it is submitted, be altered accordingly :—

New rule 82.—The Director of Industries has been authorized to sanction building grants only up to Rs. 1,000. Please see G.O. No. 1194, Educational, dated the 24th October 1914. The figure "2500" occurring in the rule may be altered into "1,000".

C.R.—11-10-15.

Make this a separate chapter and reproduce the Code with an introductory paragraph and the necessary changes in italics.

C. G. TODHUNTER—30-10-15.

"*Furniture Grants.*

"83. *Application for aid.*—Applications for furniture grants must be made in "the prescribed from (Appendix XV) and shall be accompanied by details showing "the number, description, and price of each article which it is proposed to provide. "If any allotment is required during the year, applications must reach the Director "before April 1915."

Office Note.

88. As in the case of ordinary grants it may be ruled that applications for furniture grants must be made through the Inspector. This seems to be necessary to avoid a further reference to that officer which may be inevitable.

Article 15 of the Grant-in-Aid Code.

Secretary's Note.

I would leave this alone.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Make this again a separate chapter and reproduce the Code with verbal alterations in italics.

C.G. TODHUNTER—30-10-15.

"84. *Object and proportion of aid.*—(i) Grants not exceeding one-half of the total "cost may be given for furniture, and for appliances, tools, machinery and workshop "fittings; for books and non-Indian periodicals for school libraries; and for the cost "of preparing work for exhibitions.

"(ii) Grants shall not be given to meet the cost of seats or desks of a pattern "which has not been approved by the department, or for books of the value of eight "annas and under.

"(iii) Grants shall not be given for articles regarding which the Director has "not been consulted and for which aid has not been promised previously to purchase "or manufacture."

Office Note.

89. (i) With reference to the note under paragraphs 4 and 25 of this Part, the words "for gymnasia and games"* may be inserted before the word "and"; and the words "cost of industrial exhibitions and of preparing work for such exhibitions" may be substituted for the words "cost of preparing work for exhibitions."

* Article 57 (i) of the Grant-in-Aid Code provides for this.

Yes. P.R.—4-7-15.

No. P.R.—4-7-15.

(ii) The words "or for books of the value of eight annas and under" may be omitted, as they have been similarly omitted in the revised edition of the Grant-in-Aid Code.

Article 57 (ii) of the Grant-in-Aid Code. P.R.—4-7-15.

Clause (iii) does not call for any remarks.

P.R.—4-7-15.

S K.—15-6-15.

C.R —20-6-15.

"85. *Payment of grant.*—The grant shall be paid only on submission, before "the date specified in the order sanctioning the grant, of vouchers duly receipted. It "shall be drawn on a bill prepared in the prescribed form (Appendix XVIII).

"86. *Claims of the Government.*—If an institution which has received aid under "this chapter, is closed within five years from the date on which a grant under this "chapter is drawn, the Government shall be at liberty to purchase the articles, towards "the supply of which the grant was given, at a valuation to be made by an officer to "be deputed by the Government for the purpose.

"87. *Grants by whom sanctioned.*—Grants exceeding Rs. 1,000 are sanctioned "by the Government; grants of Rs. 1,000 and under by the Director."

Office Note.

P.R.—4-7-15. | 90. These may be accepted.

S.K.—15-6-15.

C.R.—20-6-15.

Office Note.

91. Before closing this Part it is submitted that if the proposals to retain the provision for making grants to endowments are approved, the following adaptations of the rules 61 to 64 of the Grant-in-Aid Code in respect of this matter may be embodied in the Code :—

Note under paragraph 4 of Part II, page 89 *supra*.

GRANTS TOWARDS ENDOWMENTS.

"88. *Object and proportion of aid.*—Grants not exceeding one-half the amount "given or devised may, with the sanction of the Government, be made for the endow- "ment of scholarships, laboratories, workshops, museums and other educational "objects.

"89. *Conditions of aid.*—The following are the conditions under which grants "shall be given :—

"(i) The endowment shall consist of Government securities to be invested "in the names of trustees approved by the Government.

"(ii) The endowment must not be created from moneys derived either "directly or indirectly from ordinary funded or school income.

"(iii) The trust-deed, which must be approved by the law officers of the "Government, shall contain a provision that, in the event of the object for which the "endowment was created ceasing to exist, or of the management ceasing to comply "with any of the conditions of the trust, the fund shall be distributed as provided "therein.

"(iv) The trustees shall render yearly accounts to the Director in the pre- "scribed form (Appendix XIX).

"90. *Payment of grant.*—The grant shall be drawn on a bill prepared in the "prescribed form (Appendix XX).

"91. *Limits in the case of grants for prizes.*—No grants shall be given towards "any prize endowment of the value of under Rs. 1,000, nor shall the amount of grant "given towards any prize endowment exceed Rs. 1,000."

Secretary's Note.

I have already said that a reference should be made to Mr. Tressler about this.

P. RAJAGOPALA ACHARIYAR—4-7-15.

[Paragraph 4 of demi-official No. 744, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

Chapter XI of the Grant-in-Aid Code may be added as it stands on page 32 to follow paragraph 87, the appendix letters being however changed from V and W to XIX and XX and the subsequent appendices being numbered accordingly.

Further Office Note.

The draft paragraphs 88 to 91 above which have been *adapted* from chapter XI of the Grant-in-Aid Code, will meet the requirements of industrial schools. It will not be necessary to import wholesale the whole Chapter from the Grant-in-Aid Code. Clause (v) of rule 62 is inapplicable to industrial schools and has been omitted.

C.R.—11-10-15.

I would keep the Code as it stands unless there are very strong reasons for altering it.

C. G. TODHUNTER—30-10-15.

PART III—INDUSTRIAL EDUCATION.

Examinations, Certificate and Courses.

Office Note.

92. This part which lays down rules regulating examinations, grant of certificates and the fixing of courses does not seem to be open to much criticism.

P.R.—4-7-15.

PART III.

CHAPTER I.—EXAMINATIONS AND CERTIFICATES.

(Regular Courses.)

"1. In the regular courses of Industrial Education examinations are held as "follows:—

"Examinations for Industrial School-leaving certificate on the completion of the practice "stage.

"Examinations for journeyman's certificate on the completion of the workshop stage or "practical course.

"Examinations for craftsman's certificate on the completion of the workshop stage *plus* "the theoretical course.

"In addition there is a High Proficiency examination (vide paragraphs 9 and "31).

"2. The Industrial School-leaving certificate is a continuous record of a pupil's "progress similar to the Secondary School-leaving certificate in the Department of "Public Instruction. It must be posted regularly by the school authorities. The final "examination will be held twice a year in April and October, by the school authorities "in the school itself and the results of the examination will be communicated to the "Inspector. On his next visit he will verify the results by a personal inspection or "examination of the pupils and their papers and will, if satisfied, endorse the certifi-"cate. If he does not regard any pupil, though passed, as fit for a certificate he may "put him back one or more terms.

"A pupil will not be certified as having secured the Industrial School-leaving "certificate unless he can produce a Lower Elementary certificate of general educa-"tion.

"3. *The Journeyman's examination* for which apprentices will enter on completing "the prescribed journeyman's period of training under the school system will be held "twice a year in May and November and will be conducted by a Board of Examiners "appointed by Government. The examination will be held in Madras and, if neces-"sary, also in Madura and Bezwada. It will be of an entirely practical character, "and will last about a week. There will be two kinds of passes, ordinary and with "distinction.

"4. Under the apprenticeship system practical experience is acquired in a work-"shop and an apprentice obtains only his theoretical training in the school. Appren-"tices who have received their practical training in this manner may however present "themselves for the journeyman's examination if they wish to do so, subject to the "conditions laid down in the next paragraph.

"5. *Application for admission* to the examinations described in the preceding "section must be made to the Director of Industries not later than 15th March or 15th "September in each year. Forms of applications for this, and all other departmental "examinations may be obtained from the Director of Industries (Appendix XIX). "The admission fee is Rs. 2-8-0. Applicants for admission to the journeyman's "examination must submit a copy of the Industrial School-leaving certificate and a "certificate from the manager of the industrial school at which they are studying "to the effect that they have finished the prescribed course of practical training.

"Apprentices trained in a workshop must, in lieu of the above certificates sub-"mit a declaration signed by their employer to the effect that they have undergone a "period of apprenticeship at least equivalent to that prescribed in paragraph 29 for "the craftsman's certificate. They must also submit a certificate of conduct from the "principal of the school last attended and must adduce evidence of general education "not lower than the fourth form.

"6. *The craftsman's examination* for which journeymen will enter on the comple-"tion of their theoretical training, will be held twice annually in May and November, "immediately after the journeyman's examination, and will be conducted by a Board "of Examiners appointed by Government. The examination will be held in Madras "and, if necessary, also in Madura and Bezwada and will be written and oral, but the "examiners will not be precluded from applying practical tests if these are considered "necessary. There will be two kinds of passes: ordinary and with distinction.

"7. *Application for admission* to this examination must be made as in paragraph 5. "The admission fee is Rs. 5. With this application a candidate must submit a copy "of the craft qualification (fourth form) certificate and of their journeyman's certifi- "cate if they already possess one. Only candidates who have been duly registered as "pupils in a recognised industrial or trade school will be allowed to enter for this "examination.

"8. The craftsman's certificate constitutes a dual qualification, theoretical and "practical, and will not be awarded unless candidates satisfy the examiners in both "branches. The two examinations may, however, other conditions being satisfied, "be taken independently.

"9. *High Proficiency* examinations, practical or theoretical, will, when necessary, "be held simultaneously with the journeyman's and craftsman's examinations respec- "tively. No candidate will be allowed to enter for these examinations less than one "year after obtaining his journeyman or craftsman's certificate (vide paragraph 31).

"10. *Application for admission* must be made as in paragraph 5. The admission "fee is Rs. 5. With their application candidates must submit copies of their jour- "neyman or craftsman's certificate, without which qualification they will not be "allowed to appear for examination at all. If the candidates pass the examination, "their journeyman or craftsman's certificate will be given a high proficiency endorse- "ment but no separate certificate will be awarded.

"11. No examinations will be held and no certificates (beyond certificates of "attendance) awarded in connection with any classes or courses other than those "above specified.

"12. The public examinations will be held by a body of examiners nominated by "an Examination Committee and approved by Government. The Examination Com- "mittee will consist of seven members, the Director of Industries being ex-officio "Chairman and the Inspector of Industrial Schools ex-officio Secretary. Members, "who should be representative employers of labour, will retain their position on the "committee so long as they continue in the post held on election or until they resign "or are requested to do so by a majority of the other members. Vacancies thus "caused will be filled by election amongst the members themselves, the new appoint- "ment being subject to the approval of Government. The Director of Industries and "Inspector of Industrial Schools are ex-officio President and Secretary of the Board "of Examiners but cannot actually undertake examination work though they are em- "powered to attend examinations. There is nothing to prevent other members of the "committee being elected as examiners.

"13. The committee will nominate examiners to the number of at least two for "each subject (or three if the number of candidates exceeds 50) and examiners will "be appointed annually."

Office Note.

93. Mr. Tressler proposes to break away completely from the present system of Government Technical Examinations and to substitute instead examinations for each course of study in the industrial schools conducted by a separate board of examiners.

Page 12 of G.O. 833, Educational, 16th July 1914.

In his original note of 1912 also Mr. Tressler pointed out that the existing Government Technical Examinations did not test the practical ability of individual students and proposed that new examinations should be substituted for the industrial school courses. The present proposal of Mr. Tressler is supported by both the committees which considered the scheme. The proposals may be accepted for the present.

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The only point that requires notice is the constitution of the examination committee referred to in paragraph 12. The composition of this committee was recommended by the conference. There seems to be no objection to it. But in the first place it seems to be necessary to fix the period of tenure of office of the members of the Examination Committee as has been done in the case of the Secondary School-leaving Certificate Examination committee and the European School Examination Board; and especially where non-officials will have to be appointed it seems necessary to retain the course by which their removal can be effected. The draft Code lays down that the members "will retain their position on the committee so long as "they continue in the post held on election or until they resign or are requested to "do so by a majority of the other members." It is not understood what is meant by the expression "continue in the post held on election." It should also be necessary to give some power to the Government to remove the members. All this difficulty will be very much minimised if a committee is appointed for a definite period, say, for three years.

G.O. 511, Educational, 12th June 1912, and G.O. 269, Educational, 3rd May 1909.

I agree. Mr. Tressler may be asked about it.

P. RAJAGOPALA ACHARIYAR.—4-7-15.

[Paragraph 12 of demi-official No. 744-2, Educational, dated 9th July 1915.]

Mr. Tressler's reply to the reference.

12. The tenure may be fixed at three years.

Further Office Note.

The third and fourth sentences of paragraph 12 may be replaced by the following:—

"Members who should be representative employers of labour will be appointed "for a period of three years."

S.K.—11-10-15.

Paragraph 2.—In the second sub-paragraph for the words "unless he can produce a lower elementary certificate of general education" the words "unless he can produce a certificate from the headmaster of a recognized school to the effect that he has received an elementary education up to the fourth standard" may be substituted.

Paragraph 5.—In the second sub-paragraph it is stated that apprentices trained in a workshop must for admission to the journeyman's examination adduce evidence of general education not lower than the fourth form. This however does not appear to be consistent with what has been stated elsewhere on this point. According to the Code the fourth form certificate is required only for admission to the *theoretical stage* on completion of which the craftman's certificate is issued. For the journeyman's examination this qualification is not required in the case of students who appear for it from industrial schools. It is not clear why it should be insisted on in the case of apprentices seeking admission for that examination. According to the Code students from industrial schools appearing for the journeyman's examination will have only general education of the fourth *standard*. The same qualification may be laid down in the case of apprentices seeking admission to that examination. The words "and must adduce evidence of general education not lower than the fourth form" may be omitted.

Paragraph 7.—The words "craft qualification (fourth form)" may be replaced by "higher general education".

C.R.—11-10-15.

Secretary's Note.

A sectional note that treats 13 sections *en bloc* loses its value as such. I accept the above proposals, subject to the following changes:—

(i) *Paragraph* 1.—Omit the last sentence.

(ii) *Paragraphs* 3 *and* 6.—Substitute the words "at other stations to be notified" for "in Madura and Bezwada."

(iii) *Paragraph* 5.—Replace the last sentence of the first sub-paragraph by the following:—

"Every applicant for admission to the journeyman's examination must "submit a copy of his school-leaving certificate and a certificate from the manager of "the industrial school at which he is studying to the effect that he has finished the "prescribed course of practical training."

Begin the second sub-paragraph with the words "Every apprentice" for "apprentices" and change the number of the pronouns and verbs referring to the "word "apprentice" into the singular.

(iv) *Paragraph 7.*—In the third sentence replace the word "this" by "his" and insert "each" after "application"; omit the words "of the craft 'qualification (fourth form) certificate and"; substitute "his", "he" and "possesses" for "their", "they" and "possess" respectively; and add the following at the end :—

"together with evidence of general education up to the fourth form".

(v) *Paragraphs 9 and 10.*—Omit these two paragraphs.

(vi) *Paragraph 12.*—Substitute the following for this paragraph :—

"12. The public examinations will be conducted by a body of examiners "appointed by Government on the nomination of the examination committee. The "examination committee will consist of seven members, the Director of Industries "being ex-officio Chairman and the Inspector of Industrial Schools ex-officio mem- "ber and Secretary. The remaining members will be appointed by Government and "will hold office subject to the approval of Government for three years. Preference "will be given to representative employers of labour. The Director of Industries "and the Inspector of Industrial Schools will not actually undertake examination "work, though they are empowered to attend examinations. There is nothing to "prevent other members of the committee being appointed examiners".

(vii) *Paragraph 13.*—Omit "and" and make the words that follow into a separate sentence.

C. G. Todhunter.—30-10-15.

PART III.

Chapter II.—Stipends, Scholarships and Rewards.

"14. *Stipends* are not ordinarily awarded by the State in connection with the "regular courses of industrial education, though managers of industrial schools may "allow stipends to pupils out of their own funds in accordance with the rules laid "down in Part II, paragraph 53.

"Similarly employers of labour who are desirous of sending their apprentices to a "trade school but find it impossible to induce them to attend otherwise may, at their "own expense, allow stipends to their apprentices, subject to the same conditions as "above stated. The procedure is regarded as wrong in principle and will be discour- "aged as far as possible by the Director; in certain trades, however, it appears that "the giving of stipends to apprentices to make them attend classes is a universal "necessity. If this fact is agreed upon by the Director and the employers in that trade, "a standard rate of stipend will be fixed and employers will be reimbursed by "Government at the standard rate for all stipends paid to such apprentices as may be "admitted to a Government trade school for training.

"15. *Scholarships.*—With the exception of the special trade scholarships (Part I, "paragraph 40) scholarships are awarded only to pupils of industrial schools and only "in connection with the regular courses of training. No scholarships are awarded for "special classes. Scholarships are reserved for pupils of promise whose pecuniary "circumstances are certified by the head of the school to be such as to prevent them "from prosecuting their studies without assistance. The claims of those sections of "the community who are most in need of aid, will, other conditions being satisfied, "be first considered.

"The number of scholarships available will be notified in the *Fort St. George* "*Gazette* about the middle of March. Forms of application (Appendix XXIII) and "other particulars may be obtained from the Director of Industries."

Office Note.

94. These do not seem to call for any remarks.

P.R.—4-7-15.

Further Office Note.

Paragraph 14.—In the second sub-paragraph the first sentence alone need be retained. The rest of the paragraph may perhaps be omitted as being a statement of policy.

C.R.—11-10-15.

"16. *Lower scholarships.*—Scholarships will be awarded in the practice stage "of practical instruction in industrial schools. No scholarship will be awarded for "the first year (half time) but for subsequent periods the rate is as follows:—

"Awarded at end of first year (half time) tenable during second year (half time), Re. 1.

"Awarded at end of second year (half time) tenable during third year (half time), Rs. 2.

"Awarded at end of third year (half time) tenable during fourth year (half time), Rs. 3.

"Full time pupils qualify for double this amount but no individual can draw "scholarships for more than the equivalent of a four years' half-time course (two years' "full time).

"17. *Application for scholarships.*—The scholarships will be awarded on the "results of the annual school examination and for this purpose a list of results shall "be sent to the Inspector of Industrial Schools as soon as possible after the examina- "tion and not later than May 1, together with applications for scholarships prepared "by the manager on the prescribed form (Appendix XXIII).

"18. No pupil failing to secure 66 per cent of marks or a first class pass will be "eligible for a scholarship. In calculating marks, the year's work is to be taken into "account, two-thirds of the maximum total being allowed for examinations and one- "third for the year's work.

"19. *Award of scholarships.*—With the reservation mentioned in paragraph 15 "scholarships will be awarded in order of merit and the award will be notified in the "*Fort St. George Gazette* about the end of May.

"20. *Payment of scholarships.*—Scholarships will be drawn monthly by the "manager on behalf of scholarship holders. Bills must be prepared in the prescribed "form (Appendix XXIV) and presented at the local treasury for encashment.

"21. *General conditions.*—No pupil shall be allowed to hold at the same time "more than one scholarship. If eligible for more than one, he shall elect which he "will hold, and the scholarship thus set free will be awarded to the next most "deserving student. For the purposes of this rule a Government stipend is ordinarily "to be regarded as a scholarship, but in special cases the Director may permit a "scholarship holder to draw a Government stipend also.

"The candidate shall bind himself to prosecute his studies in the subject in "which he has passed and for which he is to receive a scholarship in a recognized "industrial school.

"If a scholar ceases to attend a class the fact must immediately be reported and the scholarship will be stopped.

"Any scholarship vacated in the course of the period for which it is tenable may "be awarded for the remaining period to an eligible applicant in the same year of "study as the holder of the scholarship vacated.

"Where the order of merit cannot be clearly ascertained, the Director may at his "discretion order a further competitive examination among those who are eligible for "scholarships.

"All schclarships tenable under the above rules are liable to forfeiture, for idle- "ness, misconduct, irregularity in attendance or failure to make due progress or to "secure annual promotion.

"Scholarships are valid for one calender year unless the contrary is expressed, "and run from 1st June to 1st June.

"22. *Higher scholarships.*—In schools where the "workshop" stage is not "recognized pupils passing the Industrial School-leaving certificate examination and "desirous of continuing their education in another school may, on the recommenda- "tion of the manager and at the discretion of the Director of Industries be allowed "journey man's scholarships of Rs 3 per mensem. This sum will be increased to "Rs. 5 if candidates possess the craft qualification certificate (fourth form) and take "up a theoretical course.

"23. *Application for scholarships.*—The scholarships will be awarded on the "results of the Industrial School-leaving examination. The procedure in application "is as laid down in paragraph 17.

"24. *Award of scholarships.*—Scholarships will be awarded as laid down in paragraph 19, but is subject to the Inspector's subsequent approval of the examination results. If the results are not approved the scholarship will be stopped, but no recovery will be made of any money already disbursed.

"25. *Payment of scholarships.*—When scholarships are held in an industrial school the amount will be drawn by the manager as laid down in paragraph 20. When scholarships are held at a Government trade school the amount will be disbursed to the scholarship holder at the end of every month by the Principal.

"26. *General conditions.*—To these scholarships the same conditions apply as those above specified—the scholarships are however ordinarily tenable for three years or the full period of workshop apprenticeship, whichever is less. The enhanced value of the scholarship is however only payable during the period covered by the theoretical course.

"Pupils studying in school where the workshop stage is recognised, qualify for similar scholarships if they possess the craft qualification certificate and wish to continue their training in a Government trade school.

"27. Scholarships of the value of Rs. 5 per mensem may also be awarded to promising apprentices in indigent circumstances who have not attended an industrial school and wish to undergo a course of training in a Government trade school (*vide* Part I, paragraph 40)."

Office Note.

95. The industrial scholarships now granted by the Government are regulated by the notification published annually in the *Fort St. George Gazette*. The basis on which the scholarships are given and the conditions of their grant as laid down therein undergo in the draft Code complete modification as the character and details of education have been fully altered. Where general rules are laid down those have been embodied in the Code.

The grant of the scholarships under the present notification varies from Re. 1-8-0 to Rs. 9 tenable in the various classes. According to the Code scholarships of the value ranging from Re. 1 to Rs. 3 will be awarded to half-timers in the "Practice" stage and of double the value to full timers. In the workshop stage a scholarship of Rs. 3 per mensem will be awarded and where the pupil takes up the theoretical course, the scholarship is raised to Rs. 5. These rates may, it is submitted, be tentatively accepted.

P.R.—4-7-15.

S.K.—11-10-15.
C.R.—11-10-15.

"28. *Rewards.*—All candidates passing the journeyman's examination with distinction will receive a reward of Rs. 10 and those passing the craftsman's examination with distinction Rs. 15. All candidates securing high proficiency certificates will also receive a reward of Rs. 15."

Office Note.

96. The grant of rewards is for the first time introduced in the scheme of industrial education. It is apparently intended to be an incentive to the pupil to qualify. There seems to be no objection to accept this proposal. The financial effect of these rewards is not stated. Apparently it would not be much.

P.R.—4-7-15.

Further Office Note.

Paragraphs 15 *to* 28.—A new scheme of scholarships and rewards is proposed here. This has not yet been approved by Government. As has already been suggested all reference to this scheme may perhaps be removed from the Code. The scheme may be considered separately and, if approved, it may be embodied in the scholarship notification published every year in the *Fort St. George Gazette*. It will be sufficient if the following paragraph is put in in the Code:—

"The number and value of scholarships available in technical schools and the conditions attached thereto will be notified every year in the *Fort St. George Gazette*."

C.R.—11-10-15.

Secretary's Note.

I agree. Further stipends having been dealt with elsewhere, we may cut out this chapter altogether and add the above rule at the close of the previous chapter.

C. G. TODHUNTER—30-10-15.

PART III.

CHAPTER III.—REGULAR COURSES.

(Complete course of traning.)

29. The regular courses of training are fully set forth in the appended table.

" Schedule of regular (complete) courses of Industrial Education.

Name of journeyman's course.	Practical course for journeyman's certificate.					Extra theoretical course for craftsman's certificate.				Name of craftsman's course.
	School system.				Apprentice system.	Minimum period of apprenticeship for certificate.		Theoretical course.		
	Practice stage—Name of class.	Duration.	Workshop stage—Name of class.	Duration	Period of workshop training.	School system.	Apprentice system.	Duration.	Number of subjects.	
		YRS.		YRS.	YRS.			YRS.		
Turner's and fitter's work.	Mechanical work.	2	Fitter's and turner's work.	3	4	5	4	2	4	Mechanic.
Blacksmith's work ..	Do.	2	Blacksmith's work.	3	4	5	4	2	4	Do.
Foundry work ..	Do.	2	Foundry work.	3	4	5	4	2	4	Do.
Electric fitting ..	Do.	2	Electric fitting.	3	4	5	4	2	3	Electrician.
Metal work	Do.	2	Metal work ..	2	3	4	3	1	2	Metal worker.
Plumbing	Do.	2	Plumbing ..	2	3	4	3	1	4	Plumber.
Carpentry	Wood work ..	2	Carpentry ..	3	4	5	4	2	3	Carpenter.
Joinery	Do.	2	Joinery ..	3	4	5	4	2	3	Do.
Cabinet making ..	Do.	2	Cabinet making	3	4	5	4	2	3	Do.
Compositor's work ..	Printer's work.	2	Printer's composition.	3	4	5	4	2	1	Compositor.
Proof reading ..	Do.	2	Proof reading..	2	4	5	4	2	2	Proof reader.
Press work	Do.	2	Press work ..	3	4	5	4	2	2	Press worker.
Bookbinding.. ..	Bookbinding work.	2	Bookbinding ..	3	4	5	4	2	1	Bookbinder.
Printer's warehouse work.	Do.	2	Printer's warehouse work.	2	4	5	4	2	1	Printing warehouse man.
Boot making ..	Leather work ..	2	Boot making ..	2	3	4	3	..	1	Boot maker.
Harness making ..	Do. ..	2	Harness making	2	3	4	3	..	1	Saddler.
Dress making ..	Needle work ..	2	Dress making..	2	3	4	3	2	2	Dress maker.
Embroidery	Do. ..	2	Embroidery ..	2	3	4	3	2	2	Embroiderer.
Pillow lace work ..	Pillow lace work.	2	Pillow lace work.	2	4	4	8	2	2	Lace maker.
Tailoring	Tailoring ..	2	Tailoring ..	3	4	5	4	1	1	Tailor.
Handloom weaving..	Hand-loomweaving.	2	Handloom weaving.	2	3	* 4	3	2	2	Hand-loom weaver.
Carpet weaving ..	Carpet weaving.	2	Carpet weaving.	2	3	4	3	2	2	Carpet weaver.
Agriculture	Will be dealt with by Agricultural Department.									

* *Vide* Vol. II, page 3.

Office Note.

97. The course prescribed in this chapter seems acceptable.

It may be repeated here, if necessary. I would not omit it in the other place.
P.R.—4–7–15.

As already stated in the note under paragraph 43, page 52 *supra*, the rule prescribing " drawing " as a compulsory subject of training may be brought over here.

P.R.—4–7–15.

The last item " Agriculture " may be omitted from this schedule.

S.K.—15–6–15.

C.R.—20–6–15.

Secretary's Note.

Agriculture should certainly be omitted and the fact that drawing is compulsory brought in. The introductory sentence might be made clearer, e.g.

" The regular course of training which will be recognized in industrial schools are set forth in the following table."

C. G. To HUNTER—30–10–15.

PART III.

Chapter IV.—Special Classes.

"30. Apart from the regular courses of Industrial education specified in the last "paragraph, special classes will also be arranged. These are of five kinds—

"(1) Popular lectures.
"(2) Trade Instruction classes.
"(3) Extension classes.
"(4) High Proficiency classes.
"(5) Theoretical classes.

"31. In contrast to the regular courses of education which are made up of various "elements and represent a composite and complete whole, special classes do not form "an integral part of a course of training but are complete in themselves.

"*Popular lectures*—are lectures on practical or technical subjects treated in a "popular manner and are open to any individual who chooses to attend them.

"*Trade instruction classes*—are elementary practical classes in handicraft, open to "any *bona fide* artisan who wishes to learn something about a trade.

"*Extension classes*—are practical classes of a more specialised character intended "for and open only to individuals who are already practically engaged in the trade to "which the teaching applies.

"*High Proficiency classes*—(which may be either theoretical or practical) are "classes of an advanced character, admission to which is limited to individuals who "already hold a craftsman's or journeyman's certificate.

"*Theoretical classes*—are classes in subjects which do not form part of a regular "course of Industrial Education.

"32. Industrial schools recognised up to the craftsman's stage in any subject "may, with the permission of the Director, introduce High Proficiency classes in that "subject, but no extra grant will be given on account of these classes. Trade "Instruction and Extension classes are absolutely prohibited in recognised Industrial "schools.

"In general no financial assistance will be given by Government to individuals "attending special classes. This rule may be waived by the Director in the case of "Extension classes if such assistance is found to be absolutely necessary.

"The Director is empowered to assist in the maintenance of Extension classes by "public bodies or private individuals if he is satisfied that a useful public purpose is "served thereby, but no general rules can be laid down on this point nor regarding "the character of the courses of instruction in the first three classes since these must "be determined entirely by circumstances.

"33. *Popular lectures*—will be arranged as required.

"34. *Trade Instruction classes.*—In addition to the subjects specified in column "2 (practice stage) of the statement in paragraph 29, Trade Instruction classes are "also provided in the following subjects:—

"Oil engine driving.
"Gas " "
"Steam " "
Motor car driving
Rattan work.
Electric wiring.

"These classes are open to any *bona fide* artisan. No fee is charged for admis- "sion. There is no examination and no certificates (except certificates of attendance) "will be awarded.

"35. *Extension classes*—are provided in the subjects specified in column 4 (work- "shop stage) of the statement in paragraph 29.

"These classes are open to any artisan engaged in the trade in which instruction "is given. No fee is charged for admission. There is no examination and no certi- "ficates (except certificates of attendance) will be awarded. The classes may, how- "ever, be regarded as preparatory for the journeyman's examination.

"36. *High Proficiency classes*—are provided in the following subjects :—

Name of qvalifying course.		Name of High Proficiency classes.	Charac-tor.	Dura'ion (years).
Journeyman's.	Craftsman's.			
Fitting and turning	Mechanics	Motor fitting	P.	..
Do.		Motor-car work	T.	..
Cabinet making		Cabinet making	P.	..
Presswork	Proof reader	Presswork	P.	..
Proof reading		General Printing	T.	..
Pillow lace	Tailors	Lace-making	P.	..
Tailoring	Hand-loom weaver	Tailoring	T.	..
Hand-loom weaving		Dyeing	T.	..

"37. In addition to the theoretical instruction included in the regular course for "the craftsman's certificate, theoretical classes are also provided in the following "subjects :—

"Power-loom weaving. | Brickwork, Masonry work.

"38. Individuals trained in schools where high proficiency courses are recog- "nised may present themselves for examination in the high proficiency standard not "less than twelve months after obtaining their journeyman's certificate (in the case of "practical courses) or their craftsman's certificate (in the case of theoretical courses). "If they satisfy the examiners a 'high proficiency' endorsement will be made on the "journeyman's certificate they already hold subject to the condition that they shall "have been practically engaged in the trade in which they seek special certification "for the whole period intervening between the date on which they passed the "journeyman's examination and that on which they seek to be examined for high "proficiency."

Office Note.

98. This chapter lays down special courses which are outside the regular courses dealt with in this Code. These paragraphs do not seem to call for any special notice.

P.B.—4-7-15.

Further office Note.

Paragra 32.—In the first sub-paragraph the last sentence may perhaps be omitted—*vide* note under paragraph 57 of Part II.

C.R.—11-10-15.

Secretary's Note.

The whole chapter may be omitted. High proficiency may well stand over for the present till we have got a standard of ordinary proficiency. The rest of the courses have nothing to do with the Code.

C. G. Todhunter—30-10-15.

PART III.

Chapter V.—Normal Training.

"39. Normal training will be provided by Government. Private institutions "will not ordinarily be permitted to undertake normal training.

"Training schools will be of only one kind, being institutions in which instruc- "tors are trained to superintend and direct work up to the journeyman stage. Such "teachers are termed second-class instructors. A higher technical course is however "provided to train teachers also for the teaching of theoretical subjects and teachers "who pass this examination are termed first-class instructors.

"Each training school will have a trade or industrial school teaching up to the "craftsman's standard attached to it and in both cases model workshop accommodation "will be available. A technical library will also be provided.

"40. The training schools will be under the general control of the Principal. "There will be a permanent staff, but a large part of the teaching will be done by "individuals who are actually engaged in the practice of the trades or profession in "which they teach and who only attend the school for lecture purposes for a few "hours a week.

"41. *Courses.*—The course for second-class instructors shall be as follows :—

"(1) Demonstration and instruction in model school.
"(2) Blackboard sketching.
"(3) Freehand and technical drawing and sketching.
"(4) Practical work in factories.
"(5) English.
"(6) Science.
"(7) Workshop method and discipline.

"The courses for first-class instructors includes the following additional "features :—

"(8) Teaching technical subjects.
"(9) Elocution.
"(10) Extra science.

"42. *Period of training.*—The training will extend over a period of two years. At "the end of the first year it shall be determined, on the results of examination, which "of the candidates are fit for training as first-class instructors. These candidates "will be required to remain in the school for a further period of two years, making "three in all.

"43. *Qualifications for admission.*—Admission will ordinarily be limited to candi- "dates who have passed the craft examination with distinction. Candidates who have "passed the theoretical part of the examination with distinction but have not yet "finished the qualifying period of apprenticeship may, on the recommendation of their "employers, be admitted one year before the apprenticeship period is due to terminate.

"Every candidate for admission shall submit an application in the form pres- "cribed in Appendix XXII.

"The minimum age for admission is seventeen and the maximum twenty-five ; "it shall however be in the power of the Director, in very special circumstances to "admit a candidate whose age does not fall within the above limits.

"Candidates must also produce a letter of recommendation signed either by the "manager of the last industrial school attended or by their present employer. In the "latter case a certificate of conduct from the manager of the school (industrial or "general) last attended must also be furnished.

"Before actual admission the candidate must also submit a certificate of physical "fitness and health granted by a civil surgeon or other similarly qualified medical "authority.

"44. *Selection of candidates.*—The selection of candidates will lie with the "Principal of the Training School, who should take every care to exclude those that "appear to desire training merely for the sake of stipends and without any real inten- "tion of entering the teaching profession. Preference will be given to pupils who "possess educational qualifications above the prescribed minimum for the craftsman's "certificate (fourth form) subject to the condition that their practical attainments are "not below the average.

"45. *Fees and stipends.*—No fees will for the present be charged. Stipends will "be allowed at the rate of Rs. 12 per mensem for teachers undergoing training in the "courses for second-class instructors and Rs. 15 per mensem for those attending the "first-class instructor's course.

"The maximum number of stipendaries permissible in a training school at any "one time is 20, but the Director has powers to increase the number in special cases.

"Subject to a limitation on total numbers under training, the Principal of the "Training School has powers to admit non-stipendiary pupils.

"The allotment of stipends rests with the Principal of the Training School, "who will see that the various classes of the population are fairly represented.

"46. *Probation.*—Every student shall be considered to be on probation, for 50 "working days; and if it shall appear to the Principal of the Training School that "any student is not likely to prove an efficient teacher, such student shall, with the "sanction of the Director, be required to leave the institution. During probation a "stipendiary student shall be entitled to draw the full amount of his stipend, and if "rejected at the end of the period of probation, he shall not be required to refund the "amount drawn, provided that his rejection was not due to moral delinquency.

"47. *Attendance and dismissal.*—(i) The Principal of the Training School may "give a student casual leave amounting to not more than seven days at a time, exclu- "sive of Sundays and other holidays, and to not more than fifteen days in the year. "In cases of real necessity, he may also, subject to the approval of the Director, give "additional leave, but it shall be leave without stipend. A student will forfeit one "day's casual leave for every four times that he is marked late.

"(ii) A student shall forfeit all stipend during any period, however short, of "absence without leave, and may be dismissed if he is absent without leave for three "whole consecutive working days, or for a period aggregating five whole days in any "one term.

"(iii) The Director of Industries may grant leave without loss of stipend, for "a period not exceeding one month, to a student who is absent in consequence of "severe sickness certified to by a competent medical authority, or, where this is not "available, by the head of the institution. If the leave exceeds one month, no stipend "shall be granted for the excess period.

"(ix) A student may be dismissed by the controlling authority for continued "idleness, irregularity in attendance or serious misconduct; and, if so dismissed, he "may be declared unfit for employment as a teacher. If he is a stipendiary student, "he shall also be required to refund the whole amount drawn by him from Govern- "ment funds.

"48. *Examinations.*—At the end of the two years' course for second-class "instructors or the three years' course for first-class instructors an examination shall "be held at which all teachers under training must appear. On the results of this "examination first and second class instructors' certificates will be awarded.

"49. *Agreement to be entered with by students.*—Every student shall, before any "stipend is paid him, enter into an agreement, to be executed on stamped paper in the "form prescribed in Appendix XXVII.

"50. If, from any cause other than continued ill-health certified to by a recognis- "ed medical authority, a student fails to fulfil the conditions of the agreement he may "be declared to be unfit, absolutely or for a specified period, for employment as a "teacher. If a stipendiary student, he shall also be required to refund the whole "amount drawn by him from Government funds on account of stipend or such part of "it as the authority financially concerned considers equitable in the circumstances of "the case. A non-stipendiary student who has not already paid fees shall be required "to defray the cost of his training at the rate of Rs. 15 per term and to refund any "sum spent on his account.

"51. Teachers who hold a technical teachers' certificate under the old rules or "possess any other teaching qualification may apply for recognition without under- "going a regular course of normal training. These teachers will be examined and if "found competent will receive a third-class instructors' certificate."

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Office Note.

99. As already stated, Mr. Tressler lays down the rules only for the Government institutions and precludes private or other management from opening and managing similar institutions. It has been pointed out that other agencies should also be allowed to undertake the management of similar institutions. To provide for such training a special set of rules provided for stipendiary and other grants seem necessary ; and Mr. Tressler may be asked to formulate rules for that purpose. As regards the rules in this chapter they follow the same rules in the Educational Rules. Regarding training schools the rate of stipends proposed for first and second class instructors under training, namely, Rs. 15 and Rs. 12, respectively, are those ordinarily allowed to collegiate and secondary grade teachers in training institutions. This rate will not seem to be very high for the qualifications demanded of candidates and for the length of the courses which is 3 and 2 years, respectively, as against the maximum period of 2 in the ordinary schools. This chapter does not seem to call for any further remarks.

Rule 118 of the Madras Educational Rules.

Secretary's Note.

I have already said that Government will, for a time at least, have to do the training of teachers and it is therefore unnecessary for the present to elaborate rules for *private* normal schools. But it would be politic not to say anything which may appear to indicate that the arrangement in the code is a *final* one ; and I would put the word " ordinarily " between the words " not " and " be " in the second sentence of sub-paragraph (1) of paragraph 39.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Further Office Note.

As the Director's proposals for the establishment of a normal training school have not yet been approved and are not to be approved for the present, the whole of this chapter may be removed from the Code.

C.R.—11-10-15.

C. G. TODHUNTER—30-10-15.

Office Note.

100. The remaining portion of Vol. I of the Code deals with appendices prescribing forms. These will require slight alterations with reference to the orders that may be passed on the several proposals made above. With reference to alterations in the draft Code the modifications in the appendices may be carried out afterwards.

P.R.—4-7-15.

P. RAJAGOPALA ACHARIYAR—4-7-15.

S.K-15-6-15
G.R. 2-6-15

VOLUME II.

Office Note.

101. The second volume of the code contains detailed syllabus for each subject in the various courses—' Practice' - Workshop' and Theoretical. These have been drawn up by special sub-committees appointed for the purpose. The volume also contains an introductory chapter which explains the several courses for which syllabuses are drawn up. The matters dealt with in these are purely of a technical character and they have been dawn up by special committees. They may be approved.

P.R.—4-7-15.

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Office Note.

102. It is submitted for consideration whether these notes may be sent u.o. of Mr. Tressler and he may be requested to note under each item whether he accepts the modifications proposed or not. A duplicate copy of these notes may also be sent to the Financial Department simultaneously for remarks on the financial part of the code laying down new schemes of grants, scholarships and rewards. These are dealt with in paragraphs 86, 95 and 96 of the notes above.

S.K.—15-6-15.

C. RAMANUJA ACHARI—20-6-15.

The references to Mr. Tressler on the code and also to the Director of Public Instruction had better be made demi-officially. Let me have drafts sharp. The office has taken a lot of trouble for which I am very thankful. The papers need not go to Financial just now.

P. RAJAGOPALA ACHARIYAR—4-7-15.

Draft demi-officials to Messrs. Duncan and Tressler are submitted for approval.

2. After their issue, the notes may be sent to Press for printing.

S.K.—6-7-15.

C.R.—8-7-15. P.R.—9-7-15.

Please print this on page 25 before the indices there.

Demi-official—from the Hon'ble Diwan Bahadur P. RAJAGOPALA ACHARIYAR Avargal, C.I.E., Secretary to Government, Educational Department.

To—the Hon'ble Mr. H. S. DUNCAN, Director of Public Instruction.

Dated—Ootacamund, the 9th July 1915.

No.—744-1. Edl.

A separate code of regulations for industrial and technical schools (copy enclosed) has been drafted by Mr. Tressler in consultation with representative committees of school managers and employers of labour. Paragraph 24 of chapter III of Part I of the code relates to the opening of general education classes in industrial schools. It is proposed to compress all the instruction given in the first four forms of a secondary school in a half-time course of four years. It is also proposed that the classes must conform to the general rules of the Department of Public Instruction and will be inspected by the officers of that department. I am to request you to state whether you agree to the above proposals.

I am also to enclose an extract from the abstract proceedings of the committees which dealt with the question of general education in industrial schools

Demi-official—from the Hon'ble Diwan Bahadur P. RAJAGOPALA ACHARIYAR Avargal, C.I.E., Secretary to Government, Educational Department.

To—K. T. B. TRESSLER, Esq., Acting Director of Industries.

Dated—Ootacamund, the 9th July 1915.

No.—744-2.

The following points have been noticed in the draft code regarding technical education submitted by you.

2 *Paragraphs* 35 *and* 36 *of Part I.*—The classification of industrial schools laid down does not take account of schools which may be established by local bodies. Would it not be better if schools under the management of the Government or local bodies are made to form one class, as in the case of ordinary schools under the Madras Educational Rules?

The classification "Government trade schools" does not appear to be exhaustive of *all* Government industrial schools. The Madura Technical School, the proposed Cocanada Mechanical Engineering School and the like cannot, I take it, be brought under this head, as they do not follow the apprenticeship system which is the special feature of the trade schools. Further, there may be trade schools under other than Government management; must not the classification be such as to include these also? Lastly, the necessity for opening a separate heading "Government Industrial schools leased to private bodies for working" is not apparent, as these schools are stated to be identical with private schools. Further, in paragraph 43 "leased and private owned" schools are classed as one and nowhere else is the distinction maintained. Would not the following revised classification meet all your requirements?—

(1) Trade schools	Under the management of the Government or local bodies. Under private management.
(2) Industrial schools	Under the management of the Government or local bodies. Under private management.

3. *Paragraph* 38 *of Part I.*—To fit in with the modifications suggested in paragraphs 35 and 36 of Part I the word "inspector" in clause (a) of this paragraph may be changed into "management." The paragraph will then apply to schools managed by the Government as well as other bodies.

4. *Paragraph* 4 *of Part II.*—The present Grant-in-Aid Code provides for the payment of grants towards endowments. Is it not necessary to make similar provision in the draft code also. If so, may the following clause be added as sub-paragraph 2 (iv) of this paragraph:—

"The endowment of scholarships, laboratories, workshops, museums and other industrial objects of educational value."

A separate chapter would then be necessary containing detailed rules relating to endowment grants similar to those found in chapter XI of the Grant-in-Aid Code.

5. *Paragraph* 40 *of Part II.*—The expression "public management" occurs here for the first time and it has not been defined anywhere. Apparently, schools under the management of the Government and local bodies are referred to. In the absence of a definition, would it not be better to substitute for the words "public or private management" the words "the management of the Government, local or private bodies"?

6. *Paragraph* 47 *of Part II.*—The minimum age for admission into the "Practice" section is fixed at 10. The full period of training in that section is two full-time years or four half-time years. In paragraph 48 the minimum age for admission to the "Workshop" is fixed at 14. This means that a pupil who joins the industrial school at the age of 10, if he is a full-timer, will have to wait for two years after completing his course in the "Practice" section. The rule, as it stands, will only be fit for half-timers; entering the "Practice" section at the age of 10, with a four years' half-time course, they will be eligible for admission to the "Workshop" section at the fourteenth year. Either the minimum age must be changed for full-timers, or the minimum for the "Workshop" section must be lowered, or the minimum for the "Practice" section must be raised to 12 years.

7. *Paragraph* 61 *of Part II.*—The paragraph lays down that "Drawing" must be taught by a *qualified* master. It is not stated anywhere under what test the master is to be qualified. Apparently a pass in the Government Technical Examination in Drawing is meant. If so, would it not be better to specify it?

8. *Paragraph* 63 *of Part II.*—The minimum number of pupils for recognition to the theoretical stage is fixed as 30. Under paragraph 14 of Part II the numerical limit for each teacher in a theoretical class is 20. It would thus appear that for theoretical classes there must at the start be two instructors and without that the class will not be recognized. This can hardly be the intention? Should it not be possible to recognize a class with even one teacher? If so, the minimum for recognition must be fixed at 20. For the same reason the minimum number of pupils altogether in a school, which is put down as 30, should be altered into 20 where the theoretical stage alone in a school in one subject is recognized.

9. *Paragraph* 66 *of Part II.*—Would not the first sub-paragraph of this paragraph more appropriately come under the head "Teaching grants" since it relates to the assessment of grant? It is laid down in this paragraph that pupils remaining in a particular stage in excess of the prescribed period would not count for grant. Under paragraph 45 of Part II the increase in the period of training in the "Practice" stage should receive the sanction of the Director, and where such sanction is refused the pupil will not be a "recognised" one. Thus pupils whose retention is sanctioned by the Director should be considered "recognised", and when recognized, they should naturally count for grant; if so, such cases should be provided for in this rule, and it would therefore be desirable to insert the words "or has been retained for such excess period with the approval of the Director" after the word "prescribed".

In the second sub-paragraph of this paragraph the significance of the word "thus" in the second line is not apparent and it appears to be desirable to make the point clear.

10. *Paragraph* 71 *of Part II.*—The definite significance of the third and fourth sentences of this paragraph is not clear. It is unlikely that the management will be able to forecast all their requirements so early as three months in advance of the year. Such a condition is not insisted on in the case of ordinary schools where applications are made at all times during the year and grants are disbursed as funds become available. If it is intended to base the departmental budget allotments on the applications received, the date, 15th January, is too late for the purpose. Would it not be considered a hardship to preclude industrial schools alone from applying for grants beyond the 15th January of a year?

Under each description of grants specific rules prescribing the manner and the date of submission of applications are laid down and the general rule in this paragraph does not seem to be necessary.

Further, it is not clear what is meant by "first application". If the revised rules in the present Grant-in-Aid Code in regard to building grants are adopted (vide paragraph 11 below) a preliminary application is requisite for such grants, but no date is prescribed.

11. *Paragraphs* 77 *to* 82 *of Part II.*—In the matter of building grants it is proposed to adopt entirely the practice followed in the case of ordinary schools except in regard to the payment of grants for the acquisition of sites for erection of buildings, which is proposed to be omitted in the case of industrial schools. There seems to be no reason why this should be omitted. Would it not be desirable to include provision for this also? In the draft the rules in this regard in the *old* edition of the Grant-in-Aid Code have been followed. These rules were completely revised in 1912 and further alterations have also been made subsequently. The revised rules provide for grants for extensive alterations and repairs to buildings, for payment of advances, for increasing the period of mortgage of the property to the Government to forty years, etc. It would be desirable to adopt the revised rules which are embodied in the latest issue of the Grant-in-Aid Code with suitable verbal modifications where necessary. Have you any objection to do so?

12. *Paragraph* 12 *of Part III.*—It appears to be desirable to fix the period of the tenure of office of the members of the examination committee, say, at three years, as has been done in the case of the Secondary School-Leaving Certificate Examination Board and the European School Examination Board.

13. I am to request you to offer your remarks on the above criticisms.