

Σ + P. H. (1945) Department.

MS. SERIES.

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G.O. No.

83 E.Lu.

Dated

17-1-1945

[Despatch Abstract.]

COLLEGE - Engineering - Engineering syllabuses etc. - Revision -
Notes recorded.

Back papers.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Further papers.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Post War Reconstruction

Extract of para 5 from the letter No. 1486-PPH/43-15 dated 13-3-1944 of the Chief Engineer, P.W.D. (G.B. & A.R.P.).

(2)

5. Establishment. - There will be 2 sources of recruitment postwar.

1. From the military units, and
2. From the existing civil personnel and from those who will be trained now and postwar.

This office has no information on the probable number that will be available and the training that different classes of such military personnel may have. Rules have already been formulated conferring rights to vacancies in the Civil services, to those who have rendered military service.

It would be advisable for the military officers to be offered opportunities for post-graduate work in such branches of engineering that they may choose in the months following on the close of the war, and prior to demobilisation. I would add that after the last war, such opportunities were given by certain Governments i.e., the officers were given training while still carried on the Military establishment. Even though those officers be not tied down to serve any Government Department after training, the net result is sure to be beneficial to the country and many competent officers would not be able to afford this training if they had to do it at their own expense after demobilisation. I would suggest that enquiry be made by Government as to the number of trained degree officers, that could be given say one year's training during this process of demobilisation in British Universities. The cost of that training could be charged to the respective ~~provincial~~ provincial Governments.

For entry to the Madras Educational Institutions, this class of Military establishment should be given first opportunity for training in the branches they choose - for recruitment into the Public Services, when they qualify themselves.

For the 2nd item of establishment i.e., Civil Personnel, the number that can be trained during the war will depend on the length of the war and availability of competent staff to train them.

As stated in the E & P.H. Memo under reply, the other branches of engineering - Highways and Bridges, Irrigation, Electrical, etc., will also require large additions to staff for their extension programmes.

So far as Engineers are concerned, it is unlikely that the present system of giving 2 years basic training, common to all the branches can be improved upon. Specialisation can be then proceeded with in the 3rd and 4th years. The revision and improvement of the syllabuses for these engineering courses is, however, overdue, to meet the developments that have occurred since the syllabuses were drawn up.

I would suggest that Government put a retired officer on special duty if a suitable officer can be found under present conditions, to go into the revision of the engineering syllabuses in detail and make recommendations on the following points:

(i) Detail revision of syllabuses for engineers,

(ii) Recommendations for utilising the existing educational institutions to turn out the maximum number of technical personnel with the

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25/11

Edut & H. Dept.

Drainage Kumbakonam Municipality
Opening of a Sanitary lane in
ward no II

Cro 1321. Petition from M. Kanthasamy
29.1.39

1-2

24/1/39

13214 E2 Mr 24-1-39

Transferred to the Commissioner

Kumbakonam Municipality.

23.1.39

SRK
24.1.39

To

The Commissioner
Kumbakonam Muz
through the CMC

Spd on
withd 26/1

existing laboratories and apparatus. The output could be greatly increased by the shift system in utilizing the laboratories. Classes would be increased in size (probably by utilizing also loud speakers) increasing sizes of class rooms and such other methods as might be found necessary to meet the situation. It may be added here, that the number of applications in recent years for entry to the engineering college at Guindy has much exceeded the number of entries permitted.

(iii) Similar proposals to the above to turn out supervisors and draftsmen.

(iv) Proposals if any found necessary and feasible for new educational institutions.

This Special Officer could draw up his proposals in collaboration with the Board of Visitors to the College of Engineering and the Principal of the College. The late Chief Engineer (Irrigation) Sri Dewan Bahadur I. Venkatakrishna Ayyar might be agreeable to take up this work and his connection with the College at one time would be a helpful qualification.

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Education Dept. B-5

Memo:- 8059 B-1 / 10.3.41.

Books and publications -

Text books in elementary

Schools - Ref. letter from

the P.D.B. Ramnadh

R.O. E-6 No 4477/41

dated 28.2.1941.

The P.D.B. Ramnadh

is informed that it

is not practicable

for the Department to

undertake the preparation

and publication of

School books.

The President is

referred to rule 23

of the Text Book Committee

rules whereunder the

Committee could reject

a book if it is not

Madras. reasonably priced.

Se. 6.3.41

Combinator Municipality

(with reference to his letter

No. 1040 / 41 / C.S. dated 28.2.41.)

7/3

6/3

21/10/50 C17347

3/10/50 Ex. P. 4 - Dept. (C)

C17347

Memo 17347-C-3-44 dated 15/4/44.

Postwar reconstruction -

Engineering education

In connection with certain

proposals relating to Postwar

reconstruction made by the C.E.

(by B.A.R.P.) He has proposed

that a retired officer of the

P.W.D. should be placed on

special duty to report on the

question of revision of the Engineer

4/2

syllabus, increasing the output
of technical personnel from
existing educational institutions
etc. He has suggested that Deena
Bahar L. Venkatakrishna Ayyar,
Retired C. 2 (Irrigation) might
be agreeable to take up this
work. An extract from the C.S.'s
letter is enclosed. The D.P.O. is
requested to offer his remarks
on the proposal in consultation
with the Principal, College of

Engineering.
20.4.44 21/4/44

21/4/44

To The D.P.O. (with
copy of C.S.)
P.O.

Wp initial
8/7/5

To
Secy S.O.
(with copy of)

Reminded 23.6.44.

Director accepts the 3/5
If the suggestion is to be pursued
the Director should be requested to submit detailed
proposals regarding the period for which
the Special Officer is to be employed, and
remuneration to be paid to him, etc.

10/5/44

10/5/44

10/5/44

[Faint, mostly illegible handwritten text in a South Asian script, possibly Tamil or Telugu, covering the left page of the document.]

1-11/84 C-7 Education Department. ⑥
 From Sir R.M. Statham, M.A., C.I.E., I.E.S.,
 Director of Public Instruction, Madras
 To The Secretary to the Government of Madras,
 Education and Public Health Department,
 Fort St. George, Madras.
 15 NOV 1944
 R.C.No. 492-A/44 dated 5th October 1944.
 Sir,
 Post-War Reconstruction--Engineering Education--Proposal to
 appoint an Officer on special duty.
 Reference:--Government Education and Public Health Memo.No.
 17347-C-3/44 dated 15.4.1944.
 With reference to the proposal of the Chief Engineer
 (General Buildings and A.R.P.) to appoint a Special Officer to
 report on the question of detailed revision of the engineering
 syllabuses and increasing the output of technical personnel from
 the existing educational Institutions, I have the honour to submit
 herewith a copy of the letter of the Principal, College of Engineering,
 Guindy, R.C.No. 355-D/44 dated 13.8.1944 which deals exhaustively
 with the points raised by the Chief Engineer. I generally agree
 with the remarks of the principal and support his suggestion
 that a Committee may be appointed to investigate the question.
 The terms of reference to the Committee may be on the lines indicated
 by the Principal in the last para of his letter.
 2. As regards the composition of the Committee I recommend that
 the Committee may be constituted as follows:-
 P.T.O.



- : 2 : *HT 2-11/44*
1. Sir Henry Howard, M.C. (CHAIRMAN)
 2. The Director of Public Instruction
 3. The Joint Director of Industries and Commerce
 4. The Vice-Chancellor of the University of Madras
 5. The Chief Engineer (General) P.W.D.
 6. The Chief Engineer for Electricity
 7. The Chairman, National Services Labour Tribunal
 8. The Chief Engineer, M & S.M. Railway
 9. A representative of the South Indian Chamber of Commerce
 10. A representative of the Andhra Chamber of Commerce
 11. A representative of the South Indian Mill Owners Association
 12. The Principal, College of Engineering, Guindy (SECRETARY).

I have the honour to be,
Sir,
Your most obedient servant,

The Principal of the Eng. College
has suggested the Vice-Chancellor & Annamalai
university in place of Nos. 1, 9, 11 & the
Dir. of Industries in place of No.
For Dir. - 3 above.

For Director of Public Instruction.

R.C.No. 355-D/44.

College of Engineering, Guindy,
Dated 13th August 1944.

From

Dr. J. J. Rudra, M.B.E., M.A., B.Sc., Ph.D., A.I.I.Sc., M.I.E.E.,
Mem. A.I.E.E.,

Principal.

To

The Director of Public Instruction,
Madras

Sir,

Sub:- POST WAR RECONSTRUCTION--Engineering Education.
Ref:- Your Proc. R.O.C.No. 492-A/44 dated 30th May 1944.

I am herewith submitting below, I think it very inadvisable to appoint a Special Officer for post-war reconstruction of technical education. Various other points besides those mentioned by the Chief Engineer have to be considered and in my opinion, it would be necessary to appoint a Committee to examine the question of reconstruction of technical education in all its aspects. Before submitting my proposals for the appointment of a Committee for reconstruction of technical education, I would give my reasons why I do not think it advisable for the work to be entrusted to a Special Officer suggested by the Chief Engineer.

REVISION OF SYLLABUSES FOR ENGINEERS.

The first point of reference to the proposed Special Officer for reconstruction of education is detailed revision of syllabuses for engineers. Engineers are prepared for the B.E. degree of the University of Madras in various branches. The syllabuses for various branches are drawn up by the Board of Studies in Engineering and have to be approved by the Academic Council and the Senate of the University before they can come into force. As the revision of syllabuses for Engineers means the revision of the University syllabuses, it would be very undesirable to appoint a Special Officer unconnected with the University for this purpose without the consent of the University. To obtain this consent, it would be necessary to show that the existing machinery for revision of syllabuses, described below in detail, is inadequate.

As mentioned above, the syllabuses of the University are drawn up by the Board of Studies in Engineering. The Board of Studies in Engineering consists of specialists in various branches of Engineering, many of whom have knowledge of educational institutions and engineering practice both in India and in foreign countries. Several members of the Board are actively engaged in meeting the demand for technical personnel and can be considered as 'Manufacturers' of technical personnel. Like manufacturers of commodities, these manufacturers of technical personnel carefully watch the changing needs of the consumers of their products viz. the employers of technical personnel and are constantly endeavouring to improve the existing courses and to introduce new courses for meeting the demand for new types of technical personnel.

Three years ago, the syllabuses and schemes of examination for all branches of Engineering were revised by the Board of Studies and came into force in 1944. These were submitted to the Board of Visitors of the College who after considering them decided to recommend the abolition of the College examinations. The Government have accepted the recommendation of the Board of Visitors.

At the same time, the Board of Studies drew up a syllabus for a degree course in Electrical Communication Engineering. The syllabus was submitted to the Board of Visitors of the College, who at its meeting in December 1943 recommended the starting of the B.E. degree course in Electrical Communication Engineering at the college. Detailed proposals for introduction of this course in the college are being formulated.

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At its last meeting in July 1944, the Board of studies approved the syllabus for a degree course in Aeronautical Engineering. This syllabus will be brought up for consideration before the Board of Visitors of the College when the need for starting an Aeronautical Engineering course at the College is felt.

At this meeting, the Board of studies considered the possible demand for Highway Engineers and Municipal Engineers in post-war reconstruction as well as the views of the Board of Visitors of the College with regard to specialised courses in Highway Engineering and Municipal Engineering and appointed a Committee to draft syllabuses for degree courses in Highway Engineering and Municipal Engineering. This Committee will consult important persons connected with the employment of Highway and Municipal Engineers before the syllabuses are presented to the Board of Studies for approval. The Board of Visitors will also be consulted.

The Board of Studies has appointed another Committee to draw up proposals for a course in Automobile Engineers and this committee will also follow the same line of action as the Committee for courses in Highway Engineering and Municipal Engineering.

Further revision of syllabuses of the existing degree courses in Engineering with also be taken up by the Board of studies.

I submit that the existing machinery of the University of Madras for revision of syllabuses and planning of new courses is not inadequate and the appointment of a Special Officer for this purpose is therefore inadvisable and unnecessary.

Increase in the output of technical personnel:

The second point of reference to the proposed Special Officer is to make recommendations for utilising the existing educational institutions to turn out the maximum number of technical personnel with the existing Laboratories and apparatus.

I presume that educational institutions mean technical institutions like the College of Engineering, Guindy, and Technical High Schools like the Government School of Technology, Madras, C.N.T. Institute, Madras, Ramakrishna Mission Industrial School, Madras and P.S. & G. Institute, Coimbatore, as well as various industrial schools under the jurisdiction of the Director of Industries.

The question of increase in the output of these technical institutions is a matter of detail and is best dealt by the staffs of these institutions as they have a thorough knowledge of the equipment and facilities in their institutions and are experienced in working out details necessary for increasing the output. I should think that with the increasing demand for technical education from the young men of the Presidency, every technical institution has been gradually increasing its output. I do not possess details of the increase of output of all the institutions, but would submit details relating to the College of Engineering, Guindy.

The College of Engineering, Guindy was designed for a strength of 500, but had to provide facilities for a steadily increasing number of students owing to the large demand for technical education. The present strength is 734.

In 1936, the number of admissions to the Engineer Class was increased from 66 to 100 with no addition to equipment in the laboratory, but with a slight increase in staff. Since 1942, the number of admissions to the Engineer Class has been increased still further and is 118 this year. The increase from 66 to 118, except for a few seats, was done at the suggestion of the college which had first hand knowledge of the large number of young men desirous of having technical education.

To further increase the output of Engineers and subordinates,

the College took steps to accelerate the courses, and as a result of this, 50 per cent more Engineers and Subordinates were produced during the last two years than would have been the case in the normal course.

Early in 1941, while the College was coping with the problem created by the increase in strength of the Engineer Class from 66 to 100, it undertook the training of 150 Flight Mechanics and 125 War Technicians. In spite of the increase in the number of admissions to the Engineer Class beyond 100 and the acceleration of the college courses, the college found means for training double the number of Flight Mechanics and War Technicians originally undertaken. The training of technicians involved serious difficulties as the trainees kept coming in at different times and not at a particular time as the students of the College. The College solved all these difficulties and over 1000 Flight Mechanics and 800 War technicians have received instruction in the College during the last three years.

Since the beginning of this session, the College in India to have a Sappers and Miners contingent under the U.T.C. Since the commencement of this session, it has an Indian Electrical and Mechanical Engineers contingent besides the Sappers and Miners contingent. These technical courses are mostly conducted by members of staff of the College who devote a very substantial part of their spare time to these courses without any remuneration whatsoever. These military courses should be regarded as additional courses in the college and are of great current importance. Mostly as a result of the Sappers and Miners training, the number of students accepted for Commission from the College is probably larger than the number from all the technical colleges in India put together.

The College is now planning to produce twice as many Engineers as it is doing now. Proposals for this will be submitted to you as soon as possible, after consultation with the Board of Visitors of the College. I may, however, mention here that preliminary investigations carried out so far show that the strength of the engineer class can be increased to 200 with the existing Laboratories and Workshops and the requirements in the increase of staff, hostel accommodation etc., are being examined. The strength of the Licentiate class has already been increased from 60 to 80. As a result of this and the reduction of the course from 4 years to 3 years, about 150 Licentiates are expected to pass out after 3 years from now. Proposals for increasing the strength of the Licentiate class to 100 are being considered.

The Technical Training Scheme is going to continue in certain selected centres for 18 months after the cessation of hostilities. I understand that the college will be one of the centres and shall not be surprised if other technical institutions will also be among the centres. This is a liability of the college and other technical institutions, which has to be kept in view while increase in the output of the college and other technical institutions is being planned.

Considering the college as a Manufacturer of technical personnel, it will be seen that the college has not only steadily increased the output of its standard commodities viz., Engineers and Licentiates, but has also produced new commodities like Flight Mechanics and War Technicians of various trades and potential Engineer officers for the Army. It has taken on a new line of manufacture viz., Chemical Engineers and is planning to produce more Engineers. I submit that the 'Manufacturer' viz., the college is the most suitable body for working out details for still further increase in the output of Engineers from the College. The appointment of a retired engineer for carrying this out would be equivalent to entrusting the work of organising a Factory to a consumer, in spite of the fact that the Special Officer named by the Chief Engineer was connected with the College for less than three years about 20 years ago. The interests of the consumers are in the able hands of the Board of Visitors of the College. I therefore request that as far as the question in the increase of output of Engineers from this college is concerned, it may be left to the college staff and the Board of visitors.

Similarly, it would be desirable to entrust the increase in the output of technical personnel from other technical institutions

is offering facilities for the complete training of

25 chemical Engineers. The College of Eng. Guindy is the first college

to their respective staffs and governing bodies.

3. Proposals to turn out Supervisors and draughtsmen.

The third point of reference to the Special Officer is to make proposals for turning out Supervisors and draughtsmen.

Engineers (Civil, Mechanical and Electrical) and Licentiates in Civil Engineering are eligible for appointment as Supervisors. Electrical and Mechanical Engineers are not in great demand at present and a considerable number of them would be available for employment as Supervisors until their Services are required in their own professions when the plans for industrialisation and Electrical development take effect. I should think that as the increase in the output of Supervisors is covered by the second point of reference to the Special Officer, the Supervisors referred to in the third point of reference mean Supervisors of the category of Licentiates in Civil Engineering.

As mentioned above, proposals for increasing the output of Licentiates to 100 as against the original output of 60 is under consideration. I am afraid that it may not be possible to increase the strength of the Licentiate class beyond 100, primarily because of lack of suitable applicants. This year, there were 245 applicants for the Licentiate class as against 950 for the Engineer class. A substantial number of applicants for the Licentiate class had subjects other than Mathematics as Optional and were not suitable for the Licentiate course. I had difficulty in filling up the 80 seats this year as a large proportion of the candidates who had been selected for admission did not turn up. I personally advised many applicants for the Engineer Class who had no chance of admission to the Engineer Class to take up the Licentiate course, but without any appreciable success. This state of affairs with regard to admission to the Licentiate class is not unusual, but is quite normal. During the intensive course when twice the number of students had to be admitted during a session, I used to find it very difficult to fill up 60 seats and at one time there were only 54 qualified applicants for the 60 seats. As suggested later in this letter, it would be necessary to offer facilities for higher education to selected number of Licentiates in Civil Engineering after completion of their course with a view to attract large number of students including those Intermediates who cannot be admitted into the Engineer Class.

Overseers:- The Licentiates are also required for appointment as Overseers and a considerable number of these will be required. On page 9 of my letter R.C.No.422/43 dated 28/30th April 1944, I have already referred to a proposal for training Overseers under the Technical Training Scheme. The syllabus for a 12 months intensive course for Overseers has already been drafted, but I have not gone beyond that in view of the fact that I am not able to get candidates for training as Architectural draughtsmen under the Technical Training Scheme although the trainees are offered a stipend of Rs. 45/- and are given instruction and necessary instruments and materials, free of cost.

Draughtsmen:- On page 4 of my letter R.C.No.422/43 dated 28/30th April 1944, I had informed you that the College had undertaken the training of Architectural draughtsmen under the War Technicians Training Scheme. So far about 50 Architectural draughtsmen have been absorbed by the Southern Army on Rs.100/- per month and about a dozen by the Central Public Works Department, on Rs. 50/- per mensem. I have demanded for more from the Southern Army and I expect that the Central Public Works Department would also require more in future.

However, I cannot supply them any more draughtsmen for six months more to come and if the rate of entry of trainees remains what it is now, the output per month would be about 2 or 3 after six months. If young men do not come forward to be trained as Architectural draughtsmen even when they are offered a stipend of Rs.45/- and instruction instruments and materials, free of cost, I cannot hope to form a draughtsmen class in the college similar to what we used to have at one time. I am afraid that at present the only way of obtaining Architectural draughtsmen would be through the Technical Training Scheme. I can provide facilities for training upto 80 draughtsmen immediately, but I am not getting sufficient number of trainees.

4. Proposals, if any, found necessary and feasible for new educational institutions.

The fourth point of reference to the proposed Special Officer is to make proposals, if any, found necessary and feasible for new educational institutions. It is presumed that educational institutions mean technical institutions.

At present, technical education is imparted by 4 types of institutions:

(1) Industrial schools under the Director of Industries for training craftsmen in various trades.

(2) Private schools which prepare students for technical examinations conducted by the Director of Public Instruction as Commissioner for Government Technical Examinations.

(3) Technical High Schools under the jurisdiction of the Director of Industries, like the School of Technology, C.N.T. Institute, Rama-Krishna Industrial School and P.S. & G. Institute, who among them train Licentiates in Mechanical Engineering, Electrical Engineering, Automobile Engineering, Printing Technology and Textile Technology. The examinations for Licentiate diplomas are conducted by the Government Technological Diploma Examination Board presided over by the Director of Industries.

(4) The College of Engineering, Guindy and the Alagappa Chettiar College of Technology temporarily accommodated in the College of Engineering, Guindy. The former is under the Director of Public Instruction and has a High School section for training Licentiates in Civil Engineering and a College section for training Civil, Mechanical and Electrical Engineers. The latter institution has a course in Chemical Engineering and proposes to have courses in Leather Technology, Textile Technology, Textile Chemistry, Ceramics etc. This College is under the University of Madras.

To determine whether the number of institutions of these types should be increased, it is necessary to know:- (1) the number of applicants seeking admission into these institutions, (2) the demand after the war for technical personnel trained in them and (3) the number of War Technicians and other types of technical personnel which would be available after the war. Information on the first point has to be obtained from the Director of Industries, the Director of Public Instruction and the Vice-Chancellor of the University of Madras. Information on the second point has to be obtained from employers, of which the Government Engineering departments are the largest. Information on the third point has to be obtained from the Chairman, National Services Labour Tribunal.

Administrators of technical institutions and employers of technical personnel must be consulted before the question of starting new technical institutions can be taken up. In my opinion it would not be sufficient for a Special Officer to obtain the views from the bodies concerned and then consult the Board of Visitors of the College and the Principal of the College of Engineering, Guindy. It is essential that administrators of technical institutions and employers of technical personnel must sit together, exchange views and then decide upon the starting of new technical institutions. In other words, a Committee, rather than a Special Officer, is necessary for dealing with the question of starting new technical institutions.

Proposal for a Committee for reconstruction of technical education.

There are various points besides those suggested by the Chief Engineer which have to be considered with regard to reconstruction of technical education in the province. I give below some of these points which have to be considered and for which the appointment of a Committee is necessary.

14/8/1945
21:64

Administration of technical institutions:- At present, some technical institutions are under the administration of the Director of Industries, others under the Director of Public Instruction and still others under the Universities like those in the Andhra University and the Madras University. There is a proposal to give technical and commercial education in secondary schools and this will naturally be under the control of the Director of Public Instruction. It has to be considered whether all technical education except that which is financed by the Universities, should not come under the administration of a single Officer, and whether this Officer should be the Director of Public Instruction or the Director of Industries or somebody else.

Types and location of new technical or technological institutions:-

The University of Madras has started a technological college. The Andhra University already has a technological section for training Chemical Technologists, and is planning to start an Engineering College for training Marine and Aeronautical Engineers. The Annamalai University has received a munificent donation from Dr. Alagappa Chettiar for starting a Technological institution. The type of Technological institution which the Annamalai University proposes to have is not yet known. Distribution of technical or technological institutions among the Universities has to be very carefully considered to avoid duplication and unnecessary expenditure of money, a substantial part of which comes from the Government.

A highly industrial place like Coimbatore, which is an ideal location for a technical institution, does not possess a technical institution of any standing. The question of starting a College of Engineering and Technology and possibly a Polytechnic in Coimbatore should be carefully considered.

There may be other towns where it may be desirable to start technical institutions.

Migration from a lower to a higher technical institution:-

At present a boy trained in an industrial school cannot get entry into a technical school like the School of Technology. Licentiates in Mechanical Engineering, Electrical Engineering and Civil Engineering have no facilities for acquiring higher education in an institution like the College of Engineering, Guindy. I do not possess particulars of the technical courses that are proposed to be introduced in secondary schools. Would the boys trained in these schools be able to find their way into technical high schools like the School of Technology and later on to the College of Engineering, Guindy?

In my opinion, the question of migration from one school into a higher school ~~xxxx~~ has to be very carefully examined. In England it is possible for a trade apprentice to get technical education of the University standard. Such facilities for higher technical education have brought out men of grit and determination who have been a most valuable asset to England, probably more than the men from the Universities. India should also provide such facilities if she desires to reap the benefit that would most certainly follow:

Hundreds of boys are flocking to colleges and one of the reasons for this is that they have to pass the Intermediate examination in order to obtain entry into a technical college. If the courses in secondary schools, industrial schools and technical high schools are so designed that a boy can go from a lower school to a higher school and can in the end acquire the highest technical education, the problem of rush to Arts Colleges which we see at present may be solved to a great extent. At the same time, better types of students would be attracted to technical schools and the country will get a new type of Engineer viz. an Engineer with ambition, enterprise, grit and determination.

15/8/1945
21:7

Types of Engineers to be trained:- New types of Engineers such as Highway Engineers, Municipal Engineers, Irrigation Engineers, Electrical Communication Engineers, Automobile Engineers, Aeronautical Engineers etc. are needed for post-war developments and steps have to be taken to produce them. To do this, it is necessary to have some idea of the plans for post-war developments and the number and types of technical personnel that would be required.

Foreign Scholarships:- It is essential that a substantial number of students after completing one of the specialised courses mentioned above should go abroad for practical training and research. The question of awarding State Scholarships much larger in number than has been the case in the past, should be considered.

Improvements of technical teachers:- A teacher in a technical institution tends to lose contact with practical engineering. Replacing him every few years by a man who has contact with practical engineering will not solve the problem as many more qualities besides practical experience are required in a teacher and are not generally found in practising Engineers. The solution lies in giving the technical teacher opportunities of keeping contact with practical engineering. In England, this is done by refresher courses conducted by important works. This is not possible in India at present and the best alternative to this is to give facilities to technical teachers to visit important works in their special branches with a view to keep up their contact with practical engineering. The system of granting study leave should be revived and teachers, especially, younger men, should be enabled to go abroad for research and practical experience.

Teachers in technical institutions like the College of Engineering, Guindy should do research to a far greater extent than has been done so far. This research should be done in co-operation with the Industries and the Government Engineering departments. Once teachers take to research, the quality of their teaching will improve and young men will be inspired to take up research with the result that the quality of teachers as well as the quality of students produced by the college will improve.

Committee for reconstruction of technical education:- Besides the points mentioned above, various other points have to be considered. In other words, reconstruction of technical education in all its phases has to be considered. The work involved is of the highest importance and needs the co-operation of various persons. This could best be obtained by appointing a Committee consisting of educationists and employers of technical personnel.

COMPOSITION OF THE COMMITTEE:- I suggest the following personnel for the Committee for reconstruction of technical education:-

1. The Director of Public Instruction (Chairman)
2. The Director of Industries and Commerce
3. The Vice-Chancellor, Madras University
4. The Vice-Chancellor, Andhra University
5. The Vice-Chancellor, Annamalai University
6. The Chief Engineer (General) Public Works Department
7. The Chief Engineer for Electricity on the Electrical Adviser to the Government
8. The Chairman, National Services Labour Tribunal
9. A representative of the South Indian Chamber of Commerce
10. A representative of the Andhra Chamber of Commerce
11. The Principal, College of Engineering, Guindy (Secretary)

I have suggested the Director of Public Instruction as Chairman of the Committee, because he, as Director of Public Instruction, Commissioner for Government Technical Examinations and as Government Representative in Madras, Andhra and Annamalai Universities has to do more with technical education than anybody else in the presidency and will, I believe, have to do still more after the reconstruction of technical education.

I have suggested the Principal, College of Engineering, Guindy, as Secretary, as he has experience of running a college training Civil, Mechanical and Electrical Engineers, a technical High School training Licentiate in Civil Engineering, War Technician draughtsmen and ~~XXXXX~~ surveyors and an Industrial School training Flight Mechanics, Turners, Mechanists, Millers, Grinders, Blacksmiths and Moulders.

Term of reference to the Committee: I suggest the following term of reference to the Representative Committee: term

"To examine all aspects of technical education in the Madras Presidency and to make proposals for reorganising the existing technical institutions and starting new technical institutions for providing technical personnel for post-war reconstruction, keeping in view the rehabilitation of War Technicians and other types of war personnel that would be available after the War".

I have the honour to be,
Sir,
Your most obedient servant,
sd. J.J. Rudra,
Principal.

Encl:-Memo.No.17347-C3-44 d/ 15.4.44.

/True copy/.

Extract of notes from the file relating to - Reconstruction Committee of the Government of India - Public Works and Communications. Post war Re construction schemes - Water supply and drainage

Edn. & P.H.Deptt.

One of his suggestions is to put a retired officer (Diwan Bahadur L.Venkatakrishna Ayyar, late C.E.(Irrigation) on special duty to go into the revision of the Engineering syllabus in detail and make recommendation on the points at 'M' on p.99 c.f. This is noted on below.

This may be done.
T.G.M.
17/3/44.

The D.P.I. will have to be consulted in the matter. For orders whether necessary extracts may be taken and a separate file started.

B.M.
16/3/44.

In paragraph 5 he has made proposals about personnel.

The Principal of the Engineering College is likely to have information about the number of persons who have gone to the military and the Chief Engineer may be asked to ascertain it from him. After allowing for a certain percentage, - say 10 per cent, - as likely to be retained in the military the rest may be taken into account tentatively. We may write to the military in due course as soon as demobilization starts and after we get their reply we may make such alterations in our plans as may be necessary. Their absorption into the various branches, their further training if necessary for any particular branches and the extent to which civilian personnel will have to be trained beyond what the war-returned personnel and the existing training facilities will supply, are questions which will, as indicated at page 73 c.f. and agreed to by the C.E., have to be decided after taking into account similar requirements in other directions - Communications, Electrical, Irrigation etc., in connection with postwar development schemes. The requirements in respect of water supply and drainage as now estimated may be taken into account when that coordination is made. And in that connection the suggestion made by the C.E., to have a Special Officer to report on the points involved, which have been set out by the C.E., is valuable, and may be adopted; and I think the person ~~XXXXXX~~ suggested by him, Sri L.Venkatakrishna Ayyar, would be a suitable choice. Meanwhile, as the numbers required for the present scheme are within manageable limits, it may be assumed that personnel will be available and the plan may be made ready accordingly.

The requirements during design and execution, as well as in connection with maintenance, in respect of the category of "technicians" may be coordinated with similar requirements

other heads of postwar development and linked up with plans for vocational training under the postwar development scheme for Education.

The case will be sent again for examination in due course to the departments concerned.

M.V.S.
20/3/44.

With reference to 'P' at page 31 ante, the letter at pages 111-112 has been issued.

2. The file may be sent to L.A., P.W.D., Development and Finance with reference to A on p.31 ante.

T.G.M. 12/4/44. M.V.S. 12/4/44.

Please see B on p.1 ante. A draft memo to D.P.D. is submitted.

Q.A. P.W.D. may see before issue.

20.4.44

25/4/44

21/4/44

21/4/44

P.W.D.

L.S.

The draft O.M. may be perused & the case returned to E.P.H.

24-4-44

25/4/44

27.4.44

28/4/44

20/4/44
E.P.H. Dept

May issue. Finance also may see

25.4.44

2/5/44

2/5/44



12

Finance (E.P.)

Please see note from page 1 above.

The Draft Memo may be accepted and the case returned to E.P.H. subject to the following remarks:-

If the D.P.D. agrees that a special officer may be appointed for revising the syllabus, he should submit detailed proposals regarding the period for which the officer is to be employed, the remuneration to him etc. E.P.H. may be requested to consider whether a suitable addition should not be made to the draft memo. in this regard.

DS

5.5.44

WS

7.5.44

E.P.H.

21971

Edu and P.H. Dept

8.5.44

A para has been added to the memo with reference to the Finance dept note above.



The draft memo may now issue

21971

11/5

10/5/44

10/5/44



A3 12/5/44

Issued as Memo No. 17347C-3/44 & 15.4.44

From the D.P.I., RC.No.492A/44 dated 5th October 1944.

The Principal of the College of Engineering is of opinion that it is not necessary to have a retired officer

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the national
H. W. B. P.
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Sampson's
P. W. L. A.~~

[illegible]

QDE in phalanx 29.10.44 Question for the consideration of the sub-committee

Education formed under the Post-war Reconstruction General Committee. His Dept. agreed to the inclusion of the DDE as a member of the Sub-committee. ^{in ED} Parkis dealt with in para 4 of the Report at pp 13-16 of the Scheme of industrial education under the control of the Dept of Industries & Commerce. This Dept may therefore suggest that in any committee to be set up for investigation of technical education on the lines suggested by the D.P.C., representation be given to the DDE also. No other remarks appear called for. The case may be referred to E & H. Dept.

30/1/44

J. J. J. J.

3.11/44

52570

62706 Dec-1

E.P.H.

E & P. H.

3.11.44

4/11

The D.P.C.'s report containing his proposals for post war developments has just come in.

The file may be circulated with reference to A, B, C, D & E and P.S. 6 ante. If the idea of the committee goes forward in that direction, then the question of adding to the personnel (C.P. 8) suggested by D.P.C., C.E. (communications), C.E. (Investigation) & the Director of Industries will no doubt be considered, as proposed at A on P.S. 5 ante.

3.11.44

S. J. J.

3/11/44

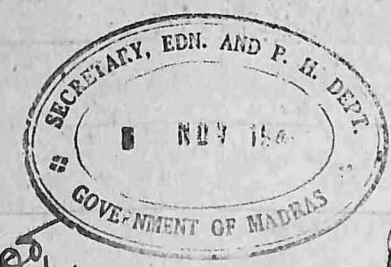
A2. A3.

I agree to the app. of a Special Committee to report on technical education in all its branches. This may be put to the Education Sub-committee before it gets down to the D.P.C.'s post-war proposals. I agree generally to Sec's suggestions in pp 556, ante, subject to discussion by Educational Sub-committee.

3/11/44

I shall be glad to have the scope of the committee defined more precisely. From the personnel proposed for the committee it would appear that its duties are to be confined to technical industries in which engineering is involved in a principal part. This may be made clear. It would ^{not} be appropriate for a committee constituted as this one to interfere with technical education in agriculture, forestry &c etc.

6/11/44



A2 my see A3's minute

he finds indicated by A2 my do to Clarified at the Sub-committee meeting.

7/11/44

M. J. J.

A2.

It has since been decided that this subject or not to go before the sub-committee for discussion. For orders as to further action.

25-11-44

S

Plan see with a of this. It is not to be discussed of this & minutes u.o.

4.11.44

Dept. of Industries & Commerce. Madras, 13th December 1944.

(5)

The Special Committee for Technical Education have considered the points raised in this file. Kind attention is invited to their report dated

13-12-1944.

6/12/13.12.44
J.D.

Secy. to Govt. Edu.&P.H.Dept. U.O.

Education and P.H. Department.

A copy of the Technical Education Committee's Report referred to above is at flag "S". That Committee did not enter into the question whether all Technical Education, except that financed by Universities, should be under the administrative control of a single Head of ~~the~~ Department, as proposed by Dr. Rudra at "Z" on p.14 C.F. The other recommendations of the Committee were considered at the meeting of the Post-War Education Sub-Committee held on the 19th December. These papers may be recorded after perusal by Development and P.W.D. // Incidentally, it may be noted that Dewan Bahadur L.Venkatakrishna Ayyar has since been appointed Chief Engineer by the Travancore Government.

21.12.44 S/ Dev.
11/14/45 P.W.
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Dev.
No. 17347C-7
21.12.44
Sec. P.W.

20 Add. u.s.

The previous notes of this Dept. are on PP 7-8 above. Further notes may be perused and the file passed on to P.W.D.

25-12-44 28.12.44 S/ 3.1.45
18/11/45
Pub. works Dept.

Dev. no.
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P.W.D. no.
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11 (16)
E.&P.H. Dept.
The papers may be
Order no. 83 Edu. 27 17.1.45.
Recorded.
College - Engineering
Engineering syllabus
Revision - Notes recorded.
12.1.45
13.1.45
15/1/45

EDN. & P.H. SECRETARIAT.

Casual Leave Sheet

1939.

Designation

Name

Leave taken in 193 — C.L.

days. Other leave

months

days.

Month.	Date (s).	Number of days.	Reason in brief.	Running total.	A.S.'s initials.	LATE ATTENDANCE.	
						Month.	Date.

Running total.

11
3