E. P. H. Dept.

G. O. No. Ms. 1196 Edn.

dated: 13. 5. 48.

㉑

E. P.

2 draft

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Edn and P. H. Dept

Memo. No. 98305 A-1/47 A Edn. d. 16.12.47.

Technical Education – Standing Advisory Board.

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p61cf

In continuation of Govt. Memo No: 68871 A.6 Edn d/ 29.11.47, a copy of the minute of H. M. (Edn) d/ 18.12.47 is forwarded to the Principal of the Eng. College, Guindy, for necessary action.

16/12/47.

16/12/47

16/12/47

16/12/47

To the Principal, Eng College, Guindy
Copy to the P.S.

with copy of H. M's minute on p7 n.f.

PTO

③

Edn and P. H. Dept

A.

U.o. note. No. 98305 A. 2/47 A Edn. d. 16.12.47.

It is proposed to hold a meeting of the Standing Advisory Board for Technical Education on the 24th Jany 1948 at 2 p.m. The Secy, Madras Legislature, may be requested to place the Council Chamber at the disposal of this dept for the purpose.

16/12/47

16/12/47

16/12/47

To the M. L. Secty.

Copy to the Principal, Eng College, Guindy

apd

BR

17/12/47

3

Sectt. of the M.L.

ASST. SECRETARY TO GOVERNMENT
18 DEC 1947
EDUCATION AND PUBLIC HEALTH DEPT.

Please see U.O. Note No. 98305 A .2/47 A Edn. dated 16-12-47, from the Edn. & P. H. Dept. at page 1 2 ante. They want the Council Chamber for holding the meeting the Standing Advisory Board for Technical Education, on 24th January 1948.

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In this connexion attention is invited to this Sectt U.O. Note No. 6391/47-1 M.L. dated 10th October 1947, in which the departments of the Sectt. have already been informed that as the Council & Assembly chambers are exclusively meant for the meetings of the Council and Assembly respectively they will not be available for any other purpose.

Under these circumstances the Edn. & P. H. Dept. may be informed that it is not possible to place the Council Chamber at their disposal.

BB 18/12/47

18/12/47

18/12

18/12

UO 8428/47-1ML
18.12.47.

T.P.H.(

Memo. No. 98305A-5/47A Edn. dated 9-2-48.

Sub: Standing Advisory Bd. for Techl. Edn. – Meeting on 24-1-48. Proceedings.

The Secretary, S.A.Bd. on Techl. Edn. ~~The Principal, Engg. College, Guindy~~ is requested to send a copy of the proceedings of the meeting of the Standing Advisory Board for Technical Education held on 24-1-48. ~~to the Govt.~~

6.2.48

7/2/48

6/2/48

To the ~~Principal~~ Secy. Standing Adv. Bd. on Techl. Edn., ~~Engg. College~~
Engg. College, Guindy.

Copy to the D.P.I.

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Despd
11/2/48

9/2
9/2/48

6 7 E.P.H.(A)

T.M. No. 98305 A. 6/47 A Edn. dated 3-3-48.

To

The Principal, Engg. college,
Guindy.

P.C. also to go

3/3/48

Sub: Standing Advisory Board for Techl. Edn. Meeting on 24-1-48 - Proceedings.

Issued
4.3.48.

5/3

Please send (urgently) two ~~a~~ copies of the proceedings of the meeting of the Standing Advisory Board for Technical Education held on 24-1-48.

2.3.48

2/3/48

3/3/48

9

(7)

E. PH. (A)

T.M. No. 98305A-7/47A Edn dated 9-4-48.

To
The Principal, Engg. College,
Guindy.

22.4.48

Sub: Standing Advisory Board for Techl. Edn. – Meeting on 24-1-48 – Proceedings.

Ref: My T.M. No. 98305A-6/47A Edn d. 3-3-48

Please send at a very early date two copies ~~a copy~~ of the proceedings of the Standing Advisory Bd. for Techl. Edn. at its meeting held on 24-1-48.

8.4.48

9/4/48

8/4/48

P.C. also to go.

8/5 15/4

Engaged
KB
14-4-48.

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(8)

College of Engineering, Guindy,
Madras-15, Dated: 24th April 1948.

ABTE.No.11/48.

ASST. SECRETARY TO GOVERNMENT
27 APR 1948
EDUCATION AND PUBLIC HEALTH DEPT.

To

The Secretary To Government,
Education and Public Health Department,
Fort St.George, M A D R A S.

Sir,

Sub: Standing Advisory Board of Technical Education - Meeting on 24-1-48. Proceedings.

====

Ref: Your T.M.No.98305 A-6/47 A Education dated 3-3-48 and No.98305 A-7/47 dated 9-4-48.

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30401

I am herewith enclosing two copies of the Proceedings of the meeting of the Standing Advisory Board of Technical Education held on 24th January 1948. The Hon'ble Minister for Education has informed me that copies of these Proceedings Need not be supplied to members.

PRINCIPAL.

Encl: 2.

PROCEEDINGS OF THE MEETING OF STANDING ADVISORY BOARD OF TECHNICAL EDUCATION HELD ON 24--1--'48.

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The first meeting of the Standing Advisory Board of Technical Education was held at the Council Chamber at 2 P.M., on Saturday, the 24th January 1948. The following were present:-

1. Hon'ble Sri T.S. Avinashilingam Chettiar, Minister for Education. Chairman.
2. Hon'ble Sri M. Baktavatsalam, Minister for P.W.
3. Sri D.S. Reddi, Director of Public Instruction.
4. Mr. W.H. Turner, Chief Engineer, (Highways).
5. Sri N. Govindaraja Iyengar, Chief Engineer (Special).
6. Sri G. Sundaram, Chief Engineer for Electricity.
7. Dr. J.J. Rudra, Principal, College of Engineering, Guindy. Secretary.
8. Sri A. Viswanath, Principal, A.H. College of Technology, Coimbatore.
9. Sri V.H. Sadarangani, Principal, College of Engineering, Cocanada.
10. Sri T.M.S. Mani, Director of Industries & Commerce.
11. Sri Govinda Menon, Joint Director of Industries & Commerce.
12. Sri K.K. Nambiar, Corporation Engineer, Madras Corporation.
13. Sri S. Govindarajulu Naidu, representing the Madras University.
14. Prof. T.R. Seshadri, representing the Andhra University.
15. Dr. K.C. Chakko, representing the Annamalai University.
16. Prof. M.S. Thacker, representing the Indian Institute of Science, Bangalore.
17. Sri N.S. Varadachari, M.L.A.
18. Sri N. Ranga Reddi, M.L.C.
19. The Chief Engineer, M. & S.M. Railway.
20. Sri V. Seshasayee, Seshasayee Bros., Trichinopoly.
21. B.S. Sanjeeva Reddi, Mining Engineer and Geographist, Kurnool.
22. Sri G.D. Naidu, United Motors, Coimbatore.

Sri S.Ramachandra, Sanitary Engineer to Government and Sri Anandan, Deputy Director of Agriculture representing the Director of Agriculture were present by invitation.

The Chief Engineer (General), The Chief Engineer, S.I. Railway, Sri Pallam Raju, and Sri R. Venkataswami Naidu had written expressing their inability to attend the meeting.

I. CHAIRMAN'S ADDRESS.

Hon. Sri T.S. Avinashilingam Chettiar, Minister for Education and Chairman of the Board, after welcoming the members of the Board, stated that modern life and modern civilization depend upon the extent of technical education that we may give to our young men and women. The progress of a nation and a country is dependent upon the extent of technical knowledge it possesses. In peace as well as

P.T.O.

in War, this is of great importance and as such no nation can neglect this side of knowledge except at its own peril. And so, for the development of our industries as well as of the various services that this country demands, it is necessary that not only should we have highly specialised personnel in the various departments of life but also that the level of scientific knowledge in the ordinary man and woman should be raised considerably.

The Chairman then referred to the interim report of the Scientific Man Power Committee of the Government of India under the chairmanship of Sir Shanti Swarup Bhatnagar that had been just published, and stated that the purpose of this Board would be similar to that of the Committee. The Board will advise the Government on all matters of technical and technological education of all types on a properly co-ordinated basis to meet the requirements and developments of this Province and India as a whole, and to examine the technical and technological education of this Province in all its aspects and make recommendations with a view to reorganise it on a basis that will make it more useful, efficient and uptodate. This Board consists of the experts of Government in the various aspects of Engineering as well as Industries and the representatives of prominent scientific associations of this Province. The Chief Engineers of the two Railway systems in this Province have also been included in this Committee with a view to get the fullest co-operation of these big transport agencies. The members who have been nominated by Government represent each one of the main industries of this Province such as Textile, Leather, Automobile, Electricity, Mining etc., so that the Government may be in touch with the needs of Industries. He had no doubt that this Committee will be greatly useful in the development of not only the technical personnel but also the various industries which are developing and which are yet to be developed in our Province.

The Chairman then referred to the two main items on the Agenda, viz., the numbe-r and types of technical personnel required in the Province and also the number of personnel now under training in the technical institutions in the Province.

He then referred to the report of the Technical Education

Committee appointed by the Advisers Government. The Committee had reported that the capacity of the then existing Colleges and Universities for the next five years was estimated approximately at 900 graduates of the University grade and that the then existing facilities were inadequate to meet the demands of future industries. They said that the Chief Engineer (Communications) requires 338 Engineers and subordinates per year. The Chief Engineer (General) estimates that 375 Engineers and licentiates per year would be required for irrigation and drainage. The Chief Engineer for Electricity requires 45 Engineers and Licentiates per year. The Railways and the Director of Industries and Commerce estimate a total of 500 Engineers for the development of industries and expansion of Railways. Thus the total estimated requirements of postwar developments of industries, roads, irrigation, hydro-electric power are over 2500 graduatex engineers, within the next five years. The development of Agriculture and Forestry will similarly require and increased number of graduates.

The Committee recommended the starting of three new Engineering Colleges, one being in the Ceded districts, and that the highest priority should be given to this recommendation. They also recommended the starting of one more College of Agriculture in the suitable place and six more Polytechnics and Industrial Schools on a regional basis. The Committee also recommended that there should be an Apprenticeship Act enabling the Government to make it obligatory on the part of employers to admit apprentices under a regulated scheme.

The Chairman stated that in pursuance of the recommendations of the Committee, the Government had started four new Engineering Colleges, one Agricultural College, and six new Polytechnics. The Industrial Schools proposed by the Postwar Technical Education Committee were suggested to be obtained by converting some of the War Technician training centres into industrial schools. As the number of technician training centres are still working, it has not been necessary to start new industrial schools.

The Chairman then suggested that the technical personnel needed by the Presidency should be made uptodate keeping in view our

P.T.O.

present requirements. He xx stated that the requirements of Municipalities and other Local Bodies were not known, but he had been informed that they had been finding it very difficult to fill up their technical posts. It should therefore be expected that they would require more technical men in the future than they do now. Besides this, the demands for technical personnel from the Railways, and the Defence Services, which are all India Services, should be kept in view. The demand for technical personnel from Provinces which are not as happily equipped as we are in technical institutions, should also be considered. To this we must also provide for a certain amount of wastages in all human institutions.

The Chairman stated that the technical personnel necessary for the Province may roughly be divided into three categories: (1) University Degree holders, (2) Licentiates, and (3) Artisans, and empahsised the importance of training in necessary proportions the technicians of these various grades. He said that training more in one section than is necessary and not providing for a sufficient number of others will result in wastage of human material, because for any work these various grades of personnel are complimentary and essential in proper proportion. In this connection, he drew the attention of the Board to the fact that while Engineers were available, Overseers have been lacking with the result that putting into execution of some of the schemes had been hindered. Because of this, the Government had to open an Emergency Centre in the middle of the current year for training Overseers.

The Chairman then stated that the general educational system of of the Province was merely academical and did not contributed towards the solution of this great problem of technical personnel. He then referred to the proposed reorganisation of the Secondary Education, whereby a good proportion of our High Schools will become technical high schools. While certain percentage of these people may go for higher studies, it will be possible and necessary for a good number amongst them to be trained as technical personnel of another category. He wanted the Board to keep this new factor in view while calculating the number of institutions that may have to be started to train the necessary technical personnel.

The Chairman then referred to the Apprenticeship Bill, copies of which had already been circulated to the members of the Board. The object of the Bill was to provide facilities for practical training to candidates in Schools and Colleges and that in this the co-operation between the Government and the various industries was involved. The success of the measure will largely depend upon the co-operation of the masters of industries and he had no doubt that those in charge of industries will come forward to lend their helping hand to this measure.

The following Agenda was then taken now by the Board.

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i) Numbers and Types of Technical Personnel required in the Province.

ii) Numbers and Types of Technical Personnel trained in various technical institutions.

iii) Apprenticeship Bill.

1. NUMBERS AND TYPES OF TECHNICAL PERSONNEL REQUIRED IN THE PROVINCE.

The Secretary read out the estimates of technical personnel required for the Province in the first five years, collected by him from various sources. Some estimates were also given by members at the meeting. These are summarised below:-

1. Chief Engineer (General) P.W.D. - for building & Drainage Works: 400 Engineers, 220 Licentiates, 176 Overseers, making a total of 796.

2. Chief Engineer (Irrigation) - for Irrigation Schemes, excluding Tungabadra and Ramapadasagar Projects:- 500 Engineers, 200 Licentiates, 200 draughtsmen and 100 Tracers, making a total 1000.

3. Chief Engineer (Special) for Tungabadra and Ramapadasagar Projects: 405 Engineers and 120 Overseers and draughtsmen making a total of 525.

4. Chief Engineer (Highways):- for road development schemes: 180 Engineers, 360 Licentiates and 160 draughtsmen making a total of 700.

5. Chief Engineer for Electricity: - for Electricity schemes: 210 Engineers, 165 Licentiates, 30 draughtsmen and 20 Tracers, making a total of 425.

6. Director of Agricultural - for agricultural schemes - 100 Engineers, 76 Licentiates and 100 Mechanics, making a total of 276.

7. Director of Industries and Commerce for various Industries xxd in the Province: 4000 Supervisory Staff comprising Engineers, Licentiates etc., 5000 Artisans and 200 personnel qualified to train technicians, making a total of 9200.

P.T.O.

8. Sanitary Engineer to Government for Water Supply and Drainage schemes: 300 Public Health Engineers and 1500 Public Health Junior Engineers in the next ten years, making a total of 1800 in ten years, or approximately 900 in the first five years.

9. Chief Engineer, M. & S.M. Railway: 12 Engineers, 157 Licentiates making a total of 169.

10. Chief Engineer, S.I. Railway: 100 Licentiates, 115 draughtsmen making a total of 215.

11. Sri Seshasayee stated that Mettur Chemicals and Travancore Fertilisers required about 90 technical personnel comprising Chemists, Engineers, Licentiates etc.

The Chairman then remarked that the estimates given above are not exact and the categories of technical personnel were vague, as it was not specified whether the Engineers and Licentiates were to be Civil, Mechanical Electrical and so on. Moreover, estimates from many other sources which required technical personnel have not been obtained. He suggested that a direction should be given to the Secretary to issue a Questionnaire to a large number of employers of technical personnel, so that we may have more exact figures.

Mr. Sundaram, Chief Engineer for Electricity remarked that a satisfactory estimate of technical personnel required in the Province, can only be made when we know what schemes the Government are going to undertake and what private enterprises will be allowed to come up. The first thing to do is therefore to have a Planning Commission to give out the scheme that will be undertaken and then to appoint a Committee which may be called Scientific and Technical Man Power Committee to make an estimate of the personnel required for these schemes. Mr. Sundaram referred to the Scientific Man Power Committee appointed by the Government of India which is collecting the requirements of technical personnel in various parts of the country. He suggested that a Sub Committee should be appointed by this Board to collect estimates of technical personnel required by the Province. He further said that some members of the Government of India Scientific Man Power Committee have collected data relating to South India and we should try to get these. He also suggested the appointment of a Statistical Commission of our own and that the Government of Madras should be requested to take steps to institute such a commission as early as possible for collecting data.

Prof. Seshadri suggested that the Director of Industries should give the types of industries that are in existence and their needs. He pointed out that Chemists are required in every industry besides Engineers and that they should also be regarded as technical personnel as far as industries are concerned.

Mr. N.S. Varadachari remarked that the figures given by the Secretary represent a staggering demand, and that although they are of some value, it is necessary for their proper consideration, to know the programme of the Government of Madras. How many crores they propose to spend and what contribution the Government of India are going to make. He drew attention to some of the resources in the country, such as lignite in Vridhachalam and iron ore in Sandur, for the utilisation of which we require technical personnel. He then pointed out that the existing industries, for example, the mica industry, was suffering owing to lack of proper technical personnel and this was putting the Government to a serious loss, of revenue. He also referred to the urgency of Water-supply and Roads for which also a large number of technical personnel were needed. But, he added that we must know what the plans of the Government were with regard to these.

Mr. T.M.S. Mani, Director of Industries stated that we must have an idea of the programmes of the Government, but this need not preclude us from making a certain estimate of technical personnel. Money required for the schemes can be created, but our bottleneck will be technical personnel. He agreed that we should obtain reliable estimates of technical personnel, but it is very difficult to obtain figures from industries, as the industries themselves are not sure of their schemes. He did not think that the Scientific Man Power Committee of the Government of India themselves would be able to obtain reliable estimates of technical personnel needed, However, he was in favour of appointment of a Sub Committee of the Board to obtain estimates of technical personnel. We would then be in a position to say to what extent we can train technical personnel required.

Dr. Chakko asked what would happen to those employed in the various projects when these Projects are over.

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Mr. K.K. Nambiar, Engineer of the Madras Corporation remarked that in these changing times, it was not possible even for the proposed Sub Committee to prepare a correct estimate of the technical personnel required. In his opinion, the technical institutions were not sufficient to produce the technical personnel required for the Province, and we are going to be far short, He was also of the opinion that technical personnel, and not finance, would be the bottleneck in the development schemes. He did not think it necessary to wait for the details of the Government programmes of industrialisation and development. The Board consisted of members who were in a position to make fairly accurate forecast of the needs of the country. The Board is in the best position to make a forecast of technical personnel needed for the various schemes. He was in agreement with the suggestion of the Chairman to issue a Questionnaire, and suggested that it should also be sent to Municipalities, District Boards and Private firms.

Mr. Nambiar then pointed out that in the estimates of technical personnel given, the ratio of Engineers to Licentiates and. Overseers was very large. Although such was the case in America, India cannot afford this. In his opinion there should be more Overseers than we have now.

Mr. Nambiar wanted the building industry to have suitably qualified Engineers and Supervisors to supervise the construction of buildings in the City, but was not able to put this into effect, owing to lack of technical personnel with the result that many useful schemes are held up. He did not think that there was any harm if we train more technical personnel than are needed. It will react in many ways and add to the Engineering Profession.

Mr. N. Govindaraja Iyengar, Chief Engineer (Special), did not think it advisable to depend upon the Government of India Man Power Committee for our data, as the Provincial Government was probably in a better position with regard to its schemes than the Government of India. For example, the Provincial Government have already started four Engineering Colleges, but the Government of India are still thinking of doing so. Estimates of technical personnel have been prepared on

the basis of the five-year post-war plan of the Advisory Government. He did not think that we can ever be sure of our programmes as these are liable to change even with the change of Government.

With regard to Dr. Chakko's remark, Mr. Govindaraja Iyengar stated, that we need not worry what is going to happen to the vast number of technical personnel that are being employed now after the schemes are completed, as there are many more Projects of building, sanitation, irrigation electricity, which have yet to come and there should be no apprehension of these technical personnel being left unemployed in the next 15 or 20 years.

With regard to Mr. Nambiar's remark on the high ratio of Engineers and Overseers, Mr. Govindaraja Iyengar said that this was because parents wanted their sons to have technical education which would put the highest positions within their reach, and more students were attracted to the Engineering course than to the lower course. ~~He thought that it would be desirable to have more licentiates and overseers than to the lower course~~. He thought that it would be desirable to have more licentiates and overseers than we have now, but he pointed out that the Government were not paying their Engineers lavishly.

Hon'ble Sri M. Bakhtavatsalam, Minister for Public Works stated that the Government already have a fair idea of their programmes for the next 5 years, as also the following 5 years. The technical personnel that is available is far far short of our requirements. Even our current programmes are being held up due to lack of technical personnel. It is high time that we take up this question in right earnest.

Mr. N. Ranga Reddi, M.L.C., gave an example of how the lack of technical personnel was holding up the schemes. He remarked that recently the Government constituted a Committee to go into the question of Rural Water Supply and Urban Drainage schemes. The Government were prepared to finance even 10 crores, but the Engineers who were sitting in this Committee expressed their inability to supply the necessary technical personnel. He pointed out that even the inves-~~[illegible]~~tigation of schemes are being held up owing to lack of technical personnel, and was of the opinion that the Government should employ a large number of technical personnel to investigate the various schemes, even though there may be some wastage.

Dr. Rudra, Principal, College of Engineering, Guindy, remarked that although the estimates of technical personnel could not be considered as accurate and he agreed with Mr. Govindaraja Iyengar that it was impossible to make an accurate estimate. The estimate of technical personnel from the Government Engineering Departments were not imaginary, but, as stated by the Hon'ble Minister for Public Works and the Special Chief Engineer, were based on programmes which the Government had in view. These should be taken seriously. The estimate of technical personnel required is collossol and we must make a survey of the output available from the existing technical institutions and take steps to increase the output if the supply from the existing technical institutions is inadequate. At one meeting of the Cabinet, the Government can decide to spend 300 crores of rupees for execution of their schemes, but technical personnel cannot be produced in such a short time. It takes a long time to produce ~~xx~~ them and we must plan for their production ~~xxxxx~~ many years ahead. People are ~~x~~ apprehensive if so many technical institutions which the Government have started are necessary and this Board should give a lead in the matter and say whether on the basis of these estimates, these institutions are necessary. It would appear that more institutions would have to be started, and it should be appreciated that we have institutions already in existence, the increased demand can be met by doubling or even trebling the strength of the Colleges until the new Colleges are started.

With regard to Mr. Nambiar's remark about the proportion of Engineers to Licentiates and Overseers, Dr. Rudra pointed out that the parents of students desire the highest type of technical ~~xxxxxxx~~ education for their sons and the demand for admission to the Degree courses was far in excess of the demand for admission to the lower courses. Last year, there were 2000 applicants for admission to the Degree courses and there were hundreds waiting to fill up vacancies through the selected candidates not turning up. The number of appli- ~~xxxxxx~~ cants for the Licentiate and Overseers course was very much less, and a large percentage of candidates selected for admission to

this course did not turn up, and there was difficulty in filling up vacancies. Last year, there were over 700 applicants for the 100 seats in the Overseers course. Of the 100 candidates selected provisionally, only 38 turned up and it took over a month to bring the strength of the class to 100.

Mr. N.S. Varadachari intervening pointed out that a Government Transport bus was lying un-repaired for a month as there was not proper men available and the Government were losing a lot of money. He suggested the necessity for having a Heavy Repair Workshop with an Institute attached to it for training Mechanics, Fitters etc., for repairing work.

The Chairman winding up the discussions on this item of the Agenda pointed out that grants made to the P.W.D. and other Government Departments for buildings, hospitals, colleges, rural water-supply etc., were being surrendered, owing to lack of technical personnel. In making an estimate of technical personnel, we should have an idea of the types of technical personnel required, such as the number of Licentiates, Electrical Engineers, Mechanical Engineers, Civil Engineers, Navigation Engineers, Agricultural Engineers, Aeronautical Engineers etc. He pointed out that the Government of India had a big ship-building programme for Vizagapatam and we must know their demand.

The Chairman also stated that a large number of Geologists were required. A Committee set up by the Government of India has given an estimate of Geologists needed for the country, and the institutions in this ~~p~~ Province will have to take up the training of ~~xxx~~ Geologists.

With regard to the remarks of Mr. Govindaraja Iyengar and Dr. Rudra, about the rush to the Degree courses, and paucity of candidates for the Licentiate and Overseer courses, the Chairman remarked that this could be remedied by making~~x~~ it possible for persons with Licentiate and Overseer qualification to obtain higher qualifications by passing certain examinations, as was done in some countries. To-day a rich man only can go to an Engineering College. We must chalk out a programme by which even a poor man can be given facilities to acquire higher qualification.

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In conclusion, the Chairman stated that it was the general consensus of opinion of the Board that a Sub Committee should be appoint

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to draw up a Questionnaire and prepare a fresh estimate of technical personnel needed in the Province.

The Board agreed to the formation of a Sub Committee and desired the Chairman to choose the personnel for it.

II. NUMBERS AND TYPES OF TECHNICAL PERSONNEL TRAINED IN VARIOUS TECHNICAL INSTITUTIONS.

The Chairman asked the Secretary to give the figures of the approximate output of technical personnel from the institutions in the Province that he had collected. The Secretary informed the Board that the approximate annual output of technical personnel of various categories was as follows:-

Degree holders:- 240 Civil Engineers, 100 Mechanical Engineers, 100 Electrical Engineers, 10 Telecommunication Engineers, 30 High-Way Engineers, 50 Chemical Engineers, 10 Textile Technologists and 6 Leather Technologists.

Diploma holders:- Mechanical 200, Electrical 170, Civil 200, Automobile 60, Printing Technology 50, Fisheries Technology and Navigation 40, Food Technology 20, Chemical Engineering 20, Sanitary Engineering 20 and Sound Engineering 20.

The Secretary informed that after two years no licentiate in Civil Engineering would be available as the Government have decided to discontinue the licentiate course and institute an Overseer Course. The output of overseers would be at least the same as that of Licentiate in Civil Engineering at present unless the Government decide to increase or decrease the output.

Craftsmen:- It was estimated by the Post-war Technical Education Committee that the output of craftsmen of various trades from the industrial schools was of the order of 1700 and it should be about the same now as no new industrial schools had been started. Many of the War Technician Training centres were still functioning and have about 2300 men under training in different parts. Craftsmen are also being trained in various industries but their number is not known.

Mr. Mani, the Director of Industries and Commerce, stated that the newly started polytechnics were not properly equipped as ~~they were not properly equipped~~ as they were started on oral orders and without

proper sanction by the Government.

There was a general discussion with regard to the equipment of Engineering Colleges besides the Polytechnics. The Principals of Engineering Colleges stated that there were no insuperable difficulties in getting equipment. The new Engineering Colleges were not as poorly equipped as generally thought and the demand for technical personnel was so great and urgent that even engineers trained in partly equipped colleges were of great value to the country.

The Principals of colleges stated that the greatest difficulty that they were up against was not equipment or finance but teaching staff. Qualified engineers were not attracted to the teaching profession because of the low salary and prospects of teachers as compared with those in Government engineering departments and private firms. It is the difficulty with regard to staff which is the more serious problem and the only way of solving it is to make the salary of teachers much more attractive.

The Chairman intervening in the discussion remarked that the technical institutions must have necessary equipment and it was the duty of the authorities to which the institutions were affiliated to see that they maintain a proper standard. He stated that a number of students had been sent abroad for advanced training with the object of appointing them as teachers on their return and that they were trying to get refugee officers from Punjab and Sindh for posts in the Colleges.

The question of organisation of the courses in the colleges and improvement in the standard of instruction was also raised and it was suggested that a committee may be appointed to look into this as well as the problem of staff. The Secretary drew the attention of the Board to a letter from the Madras University stating that the syllabus and standard of courses of the University are within the purview of the University authorities and not the Board. The Secretary, however, stated that there is nothing to prevent the Board from appointing a committee and making suggestions with regard to the improvement of courses offered by the University and that a committee may be appointed at a later date to look into this question.

Mr. K.K. Nambiar pointed out the difficulty of getting maistries and suggested a short term course for training them. The

Secretary drew the attention of the Board to the Government Technical Examinations that have been conducted in the Province since 1886 and thousands of young men have since taken various examinations and that these candidates are a source of technical personnel of the maistry type.

Mr. G.D. Naidu stated that the present temples, schools and universities should be completely demolished and burnt to ashes because in his opinion, they were the slaughter houses for the modern youth under the present system of education. He had given very careful consideration to various aspects of this question and could speak for hours on each one of these, but did not want to take the time of the Board. It was suggested to Mr. Naidu that he may put down his views in writing for circulation among the members of the Board.

Dr. CHAKKO said that there were a number of Engineering Colleges in South India, including among these the College at Trivandrum and Mysore. There should be some coordination between these colleges and it should be possible for a student of one College to go to another College for a course which did not exist in his own College.

THE CHAIRMAN intervening stated that institutions were not run for particular regions only and that students from Malabar and Tamilnad could go to the Cocanada College.

THE CHAIRMAN proceeding said that a Committee of the Government of India had recommended the reduction of the period of study of the Engineering course from four years to three years and the introduction of the Shift system. These suggestions will have to be examined by the Board and the Universities. Buildings were the bottlenecks in the increase in the number of students in the Colleges and in having the shift system and we must take steps to provide the necessary hostel accommodation so that the same equipment can be utilised for training a larger number of students.

THE CHAIRMAN then referred to the scheme of the Government to have Technical High Schools so that students can have a vocational course after the Third Form and this should be kept in view while determining the output of technical personnel. In his opinion, a larger number of vocational courses should be offered by these technical High schools and the training should be such that some who could not afford to go beyond the high school stage, would be able to earn their living. This country was in great need of young men trained in Agriculture and he hoped that at least 20 per cent of the school-going population would take up Agriculture.

The Chairman stated that Sir John Sargent and Dr. S.R. Sen Gupta of the Ministry of Education, Governmentx of India have discussed with him the question of Technical High Schools and were of the opinion that the technical high schools should x not be considered inferior to academic high schools. We should see to it that the students in technical high schools xxxxxxxxx are not branded as inferior to students in academic high schools. This could be avoided by making it possible for students from technical high schools to go ~~to~~ either to a Polytechnic or to an Arts College. A Committee of the Madras University was of the opinion that the latter should be possible by running a parallel course in Arts College for students from technical high schools, and making provision for them to take some additional subjects over and above those taken by the students from academic high schools.

THE CHAIRMAN then referred to the Electrical Engineering course at the Palghat College and hoped that the Presidency College would also have a similar course.

THE CHAIRMAN pointed out the importance of Humanities in an Engineering course, as it was necessary that an Engineer, besides having technical knowledge must also be a cultured man.

In the discussion that followed, Dr. Chakko pointed out that the proposal for bifurcated courses in High Schools was considered previously and it was strongly opposed by eminent public men on the ground that it will give an inferiority complex, to the students taking to technical studies.

Dr. Rudra pointed out that, while for sometime the technical course in High School will be considered inferior to the academic course, whether we like it or not, in course of time, it would be the other way round. This has happened with regard to Arts and Science courses in the past. At one time, study of Humanities was more popular than study of Science. But things were different now, and a perusal of the merit list of the Intermediate examination would show

P.T.O.

that the best boys were being attracted to the science courses. That has also been the case with Engineering. At one time mostly xx black sheep of the family used to go in for Engineering. But, now the best boys are attracted to it and it is the most proper course.

THE CHAIRMAN stated that our Colleges and Polytechnics should have a Workshop attached to them on commercial lines. India is the only place where industrial schools are fun at a loss. He quoted the P.S.G. Institute as an example.

The Chairman further stated that it was doubtful if academic High Schools would also be able to have technical courses and it may be necessary to start a number of Polytechnics in various parts of the Presidency, each having a variety of subjects. He also suggested that it should be made possible for students to appear for higher examinations and be classed with B.E's. He pointed out that most of our people cannot afford to go beyond the high school stage and requested the Chief Engineers to suggest the subjects other than those already in the scheme to be included in the technical high schools. THE CHAIRMAN suggested that there should be a meeting of the Chief Engineers, Director of Public Instruction and the Director of Industries to determine the subjects that should be taught in technical high schools.

APPRENTICESHIP BILL.

The majority of members of the Board were of the opinion that an Apprenticeship Bill is necessary to provide facilities for practical training to students from technical institutions and that students should be paid a stipend, while undergoing practical training. The majority of members of the Board representing industrial interests were in favour of the Bill, but were of the opinion that payment of stipends to Apprentices should not be made compulsory, but should be left to the industries concerned to pay as and when they think it desirable.

THE CHAIRMAN said that the Bill would be examined departmentally and if necessary a Sub Committee of the Board would be appointed to examine the Bill in its final form.

To a question how often the Board will meet, the Chairman said that it would meet once in three months or so.

CONCLUSION.

Before conclusion of the meeting, the CHAIRMAN said that this was almost a preliminary meeting for knowing each other. The real work of the Board will depend upon its advice on the efficient running of our technical educational institutions. There is considerable scope for making the education in our technical Colleges and Polytechnics more efficient.

THE CHAIRMAN further stated that at the next meeting of the Board, he proposed to bring up for consideration, the question of introduction of commercial sections along with college courses, which will give practical training in colleges. This will make our boys really practical minded and make them know their jobs. He stated that more practical training was being introduced in general education.

THE CHAIRMAN stated that one of the important functions of this Board was to create a sense of co-ordination between the technical institutions of various grades in the Province and to decide which Colleges should have which courses so that with our limited finances, we can have specialised courses spread over various institutions. The Board would also be required to determine the subjects which should be taught in Polytechnics and the subjects which require further study and should be entrusted to the Universities.

The Board would x also have to consider the suggestion of the Government of India Committee to reduce the Engineering Degree course by one year and to adopt it, if it is profitable, and if it can be done without reducing the efficiency.

THE CHAIRMAN finally stated that the real objective of this Board will be to make technical education absolutely top efficient so that it will not only be good for the technical personhel, but the general level of the people will also be raised.

J J Rudra
SECRETARY.
Standing Advisory Board of Technical
Education.

PTSS.
1029/1873

Extracts from the minutes of H.M.(Edn.) dated 13-12-47 in the file re: the constitution of the Standing Advisory Bd. on Techl. Edn. bearing c.no. 68871A/47.

A meeting of the Technical Education Board may be summoned on Saturday the 24th January 48 at 2 p.m. in the Council Chamber, The agenda may be:

1. The technical Engineering personnel that we require in the Province.
2. The various grades and types of the technical personnel that we require
3. The Apprenticeship Bill.

Dr. Rudra, the Principal of the Engineering College, Guindy, who is the Convenor of the Committee may be asked to circularise to the members of the Board the date of the meeting immediately. The agenda may be sent a little later. He may be asked also to discuss with me any other particulars that may be necessary in connection with the meeting.

T.S.A.
13-12-47.

A copy of the minute above may be sent to the Principal, Eng college, Guindy. A draft memo is subd.

A draft D.O. note to the Secy, Madras Legislature is also subd with reference to the placing of the Council Chamber at the disposal of this dept for the meeting of the Board.

16/12/47.

16/12/47

p c f.
p 2 c f.

[Issued as Memo. No. 98305A-1/47 A Edn. d. 16.12.47. and D.O. No. 98305A-2/47 A Edn. dated 16.12.47.]

Please see the note of the Secretariat of the Legislature on page 3 c.f. It is understood from that office that the Committee room may be available. They may be formally asked for that. A draft D.O. note is subd. H.M. (Edn) may see.

22/12/47

23/12/47

H.M. (Edn.)

The Committee Room is very noisy. The meeting of the Basic Education Board was held there. We could not conduct the meeting. I think it may be held in the Council Chamber. We are not having any session on the 24th January 48. I don't think there will be any difficulty.

TSA
23.12.47

SECRETARY, EDN. AND P. H. DEPT.
23 DEC 1947
GOVERNMENT OF MADRAS

The file may be sent to the Secy, Madras Legislature, u.o. with reference to H.M's minutes above.

28/12/47

23/12/47 S

3/1/48

Secy. Mas. Legis:
E.P.H.u.o. 98305 A-3/47A
dated 3/1/48

ASSISTANT SECRETARY, MADRAS LEGISLATURE
8 - JAN 1948
FORT ST. GEORGE

C66/48 ML
3.1.48

Sectt. of the M.L.

Please see the notes of this Sectt. at page 3 c.f. and that of the Edn. & P.H. at page 1 ante and also the remarks of the H.M. Education above.

The Council Chamber is ~~preferd~~ preferred for holding the meeting of the Standing Advisory Board for Technical Education on 24th January 1948, which is a public holiday on account of ~~the~~ Meeladi Nabi.

For orders.

5/1/48.

5/1 MSR 5/1 S ~~DS~~

Hon. Prest. decided that the Council chamber should not be used for purposes other than those connected with the meeting of the Legislature. In accordance with his decision a. u. o. with [illegible] [illegible] to all depts.
5/1/48

Hon. Prest.

Meetings in Council Chamber have become too frequent. I therefore think it better if the meeting is held in some other place
6/1

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(19)

The file may now be returned to the Edn. & P. H. Department with the remarks of Hon'ble the President at page 2 ante.

SB
6/1/48 6/1/48.

6/1 MSR 7/1

Edn & P. H. dept.
A

no 8428/47-2ML
7.1.48.

The file may be recirculated to H.M. (Edn.)

8/1/48 S 8/1/48

H.M. (Edn.)

8/1

ASSISTANT SECRETARY, MADRAS LEGISLATURE
10 JAN 1948
FORT ST. GEORGE

I have had a talk with the President of the Council over the phone. He is agreeable to the holding of this meeting as well as other Provincial Advisory Boards and so the meeting may be held in the Council Hall as scheduled.

TSA
9.1.48

The file may be sent to the M.L. Sectt. for perusal of the minute of H.M. (Edn.) above.

9.1.48

9/1/48

9/1/48.

Sectt of the Madras Legre.

SECRETARY, EDN. AND P. H. DEPT.
9 - JAN 1948
GOVERNMENT OF MADRAS

E.P.H.u.o. 98305 A-4/47A
dated 9-1-48

Sectt. of the M.L.

The minutes of H.M. Education may be perused and the file returned to the Edn. & P. H. Department.

C193/48 ML
12-30
10.1.48

SB
10/1/48 10/1/48

10/1 MSR 10/1 ~~DS~~ ~~Edn & P H dept~~

Hon. President

A

I have given permission for the present meeting. As regards other meetings they will be dealt with individually.
10/1

Edn. P. H. u.o.

no 8428/47-3ML
15-1-48

4

E.P.H.(A)

The minute of the Hon'ble President at A on p 3 ante may be perused. The file may be circulated to H.M.(Edn.) for information.

15-1-48

15/1/48

16/1/48

S/H 16/1/48

Hr. (Br.)

16/1

TSA
17-1-48

SECRETARIAT, EDN. AND P. H. DEPT.
19 JAN 1948
GOVERNMENT OF MADRAS

The Standing Advisory Board for Techl. Edn. since met on the 24th Jan. 48. A copy of the proceedings of the meeting may be called for from the Secretary to the Board. A draft memo is submitted for approval.

6-2-48

7/2/48

6/2/48

[Issued as Memo. No. 98305 A. 5/(?) A Edn. d 9.2.48.] p 5 c.f.

P.T.O.

5

(20)

The Principal who is in charge of the Engineering College rang me up and said, with reference to a request sent to him to send the minutes of the meeting of the Standing Advisory Board for Technical Education, that Dr. Rdura had a copy made ready and taken to H.M.(Edn) for approval, that he has no other record about the meeting in the file, that he rang up the Minister and ascertained that the copy of the minutes taken to H,M.(Edn) for approval was just being sent down to the office. Please verify.

A

10/2/48.

A' above: Submd. that the copy of the minutes has not yet been received in office. For orders whether this may be circulated to H.M.(Edn.) with the request that the copy of the minutes may be sent down to office.

21/2/48.

23/2/48 S/ 23/2/48

Hr. (Br.)

28/2

I believe the minutes are not with me. They have been sent up to the office. Now that the Principal Dr. Rudra has returned, even if it is missed, I hope he will have copies of the minutes.

TSA
3-48

SECRETARY, EDN. AND P.H. DEPT.
2 MAR 1948
GOVERNMENT OF MADRAS

A

A draft T.M. is subd. for approval.

2.3.48

3/3/48

[Issued as T.M. No. 98305A. 6/(1) A Edn. d. 3.3.48.] p7 c.f.

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c.no. 30401 From the Principal, Engg. college, Guindy A BTE. No 11/48 dated 24.4.48.

The proceedings of the Standing Advisory Bd. for Techl. Edn. at its meeting on 24-1-48 on p 13-29 c.f. may be perused.

2. Action is called for only with reference to 'B' on p 23-24 c.f. and 'C' on p 28 c.f. W.r.t. 'B', action has already been taken vide L.F. II. W.r.t. 'C', an extract of the relevant portion has been taken and added to the connected file linked hereto as L.F. I.

× c.no. 7031A/48 A

× c.no. 54467/45 A

3. No further action is called for in this file. The papers may be recorded.

8.5.48

10/5/48

12/5/48

S

Abstract
Techl. Edn. – Standing Advisory Bd. – Proceedings of meeting on 24-1-48 – Papers recorded.

G.O. 1196 Edn.
13-5-48