

E. P. H. (1947) Department.

Ms SERIES.

A S D

G.O. NO. 2750 Edu

Dated 23-12-47

[Despatch Abstract.]

Legislative Council Question - Expert Committee
for Organising Engineering Colleges. Particular
regarding - Question lapsed. Papers recoded.

R5

Further I		
No.	Department.	Date.

Secretariat of the Madras Legislature.
(Council Section.)
1/10/46.

Starred Question.

Sri R. Suryanarayana Rao, M.L.C.
Education and Public Health Department.

*Q.No.199. Will the Hon'ble the Minister for Education be pleased to state:-

(a) whether the Government have constituted an Expert Committee for organising the Engineering Colleges in the Province;

(b) if ~~the answer to (a) is in the affirmative~~, so, what the constitution of and the terms of reference of the Committee are;

(c) whether the Committee have submitted their conclusions either tentative or final on any or all the subjects referred to them;

(d) whether the Government have taken action on the recommendations and ~~is~~ so the nature of such action;

(e) whether it is proposed to make the Expert Committee a permanent Standing Committee of Technical Education to advise Government on all matters relating to technical and technological education of all kinds;

(f) if the answer to (e) is in the negative, whether the question of constituting a different Standing Board of Technical Education is under the consideration of Government;

(g) whether ~~the Government are under~~ ^{it is a fact} that at present different types of technical colleges and Schools are under different Departments of Government;

(h) whether the question of transferring technical education of all types to the Department of Education is also under consideration; and

(i) whether the Government propose to depute any officer of Government to foreign countries to study and purchase specialised equipment necessary for various technological institutions already started and to be ~~started~~ started?

Starred Question.

Sri R. Suryanarayana Rao, M.L.C.
Education and Public Health Department.

Draft Answer:-

*Q.No.199. Will the Hon'ble the Minister
for Education be pleased to state:-

(a) whether the Government have con-
stituted an Expert Committee for orga-
nising the Engineering Colleges in the
Province;

(a) and (b): Yes. a copy of
G.O.No.1213, Edn., dated 17-6-46, is
placed on the table of the House.

(b) if so, what the constitution of
and the terms of reference of the
Committee are;

(c) whether the Committee have sub-
mitted their conclusions either tentative
or final on any or all the subjects refer-
red to them,

(c) and (d): The Committee has
submitted ^{certain} interim proposals which are
being considered by the Government.

(d) whether the Government have taken
action on the recommendations and if so,
the nature of such action;

(e) whether it is proposed to make
the Expert Committee a permanent Standing
Committee of Technical Education to Advise
Government on all matters relating to
technical and technological education of
all kinds;

(e) One of the recommendations of
the Committee is that a Standing Advi-
sory Committee of Technical Education
should be set up to advise Govt. on all
technical matters.

(f) if the answer to (e) is in the
negative, whether the question of con-
stituting a different Standing Board
of Technical Education is under the con-
sideration of Government;

In view of answer to C & D
(f) Does not arise.

(g) Whether it is a fact that at
present different types of technical col-
leges and schools are under different
Departments of Government;

(g) Yes.

(h) whether the question of trans-
ferring technical education of all types
to the Dept. of Edn. is also under consi-

(h) No.

deration; and

(1) whether the Government propose to depute any officer of Government to foreign countries to study and purchase specialised equipment necessary for various technological institutions already started and to be started?

(1) This is also one of the recommendations of the Expert Committee; it is under consideration.

Edn. v. 60310 A 146 TE
26 to 26

To The Secy of Madras
Legislature,
Copy to Pub. (Ede.) Dept.
2 Spare copies

LEGISLATIVE ^{Council} QUESTION NO. 199
(Starred)

Sri R. Suryanarayana Rao, M.L.C.

Will the Hon'ble the Minister for Education be pleased to state:-

(a) whether the Government have constituted an Expert Committee for organising the Engineering Colleges in the Province;

(b) if so, what the constitution of and the terms of reference of the Committee are;

(c) whether the Committee have submitted their conclusions either tentative or final on any or all the subjects referred to them;

(d) whether the Government have taken action on the recommendations and if so, the nature of such action;

(e) whether it is proposed to make the Expert Committee a permanent Standing Committee of Technical Education to advise Government on all matters relating to technical and technological education of all kinds;

(f) if the answer to (e) is in the negative, whether the question of constituting a different standing Board of Technical Education is under the consideration of Government.

(g) whether it is a fact that at present different types of technical colleges and schools are under different Departments of Government;

(h) whether the question of transferring technical education of all types to the Department of Education is also under consideration; and

(1) whether the Government propose to depute any officer of Government to foreign countries to study and purchase specialised equipment necessary for various technological institutions already started and to be started?

EDUCATION AND PUBLIC HEALTH DEPARTMENT

ANSWER:-

(a) & (b): YES. A copy of G.O.No. 1213 Edn. dated 17-6-46 is placed on the table of the House.

(c) & (d) The Committee has submitted certain interim proposals which are being considered by the Government.

(e) One of the recommendations of the Committee is that a Standing Advisory Committee of Technical Education should be set up to advise Government on all technical matters.

(f) In view of answer to C & D. Does not arise.

PTO

(2) YES

(h) NO

(1) This is also one of the recommendations of the Expert Committee; it is under consideration.

For SECRETARY TO GOVERNMENT.

To the Secretary, Madras Legislature *council* (assembly section)
Copy to the Public (Elections) Department.

The above answer has been approved by the Hon'ble
Mr. T.S. Avinashilingam Chettiar.

STATION U.O.No. 60310 A/46-1
dated 26-10-46.

s/c

(5) (5) 5
COPY OF G.O. NO. MS. 1213 Edn. dated the 18th June '46.

Colleges—Engineering—Vizagapatam and Anantapur—Constitution of an Expert Committee—Ordered.
G.O.No. 889 Education, dated the 27th April 1946.

In G.O.No. 889 Edn. dated the 27th April 1946, the Government appointed an Organising Principal, to Prepare in advance materials required for consideration by an Expert Committee intended to be constituted for giving advice on the question of opening additional Engineering Colleges in the Province. The Director of Public Instruction has since reported that the first two years' courses of studies in all Engineering Colleges are common for all branches of Engineering and that specialisation should commence only in the third and the fourth years. He has accordingly suggested that the advice of the Expert committee is necessary concerning the details of the specialised courses of studies to be started when the colleges are opened in permanent buildings. The Government have since sanctioned the opening of two Engineering Colleges—one at Vizagapatam temporarily located at Cocanada and the other at Anantapur to be temporarily located at Guindy, pending construction of buildings for the institutions.

2. The Government now constitute an Expert Committee consisting of the following members:—

1. R. McIntosh, Esq., Chief-Engineer, (Gl. Bldgs. & Defence) Chairman.
2. The organising Principal of the Colleges (Secretary)
3. Sri Rao Bahadur A.R. Venkatacharya, Chief-Engineer (Irrigation)
4. W.H. Turner Esq., Chief-Engineer, Highways.
5. Sri G. Sundaram, Chief-Engineer for electricity.
6. Chief Engineer, Madras & Southern Mahratta Railway.
7. Sri Dewan Bahadur A.V. Ramalinga Ayyar, Retired Chief-Engineer to Government.
8. Dr. V.M. Ghatge, Assistant Professor, Aeronautical Engineering, Indian Institute of Science, Bangalore.
9. Dr. R.G. Harris, Professor, Aeronautical Engineering, Indian Institute of Science, Bangalore.
10. The Secretary, Madras Flying Club.
11. G.P. Alexander Esq., Chairman, Port Trust, Madras
12. E.M. Eduljee Esq., Engineer in charge of Vizagapatam ship yard.
13. F.H.Mc. D. Wilson Esq. Superintendent, Vizagapatam Port.
14. The Principal, Engineering College, Guindy.
15. Sri S. Govindarajulu Naidu, Vice Principal, Law College Madras.
16. The Vice-Chancellor, Andhra University or a representative of that University.
17. The Principal, Arthur Hope College of Technology, Coimbatore.
18. Representative of the Annamalai University.

PTO

The Non-Official members of the Committee will be allowed travelling allowance at the rates noted below:—

Railway journeys - 1 First Class Fare and 1 third Class, fare (if a servant is taken)

Mileage - Annas twelve
Daily allowance - Rs 7-8-0

3. The Committee is requested to consider the following matters and send a report to Government as early as possible:—

1. The specialised course of studies to be provided in the college, account being taken of the courses of studies in the existing Engineering Colleges;

2. the permanent arrangements to be made for the location of the Colleges—e.g. site, buildings;

3. the staff to be employed; and

4. other cognate matters.

The Director of Public Instruction is requested to arrange for placing before the Committee all the materials already gathered.

/True copy/

SUPERINTENDENT.

SECRETARIAT OF THE MADRAS LEGISLATURE,

Fort St. George, dated the 8-10-1946

QUESTION No. 199

held on the

for the meeting of the Legislative Council

193

Two copies of this question are forwarded to the Edn and P.H. Department.

The question has been admitted.

To

The Edn and P.H. Department.

Edn. & P.H. Dept. (A).

Please see the question in the C.F. The draft answers may be as follows:—

(a) and (b). In G.O.No.1213, Edn., dated 17-6-1946, the Government have constituted an Expert Committee consisting official and non-official members to advise the Government on the terms of reference contained therein. A copy of the order may be placed on the table of the House.

(c) and (d): The Expert Committee met for the first time officially on the 5th and 6th July, 1946 and made certain interim recommendations. The D.P.I., has forwarded them with his remarks. The recommendations of the Committee and the D.P.I.'s remarks are as below:—

RECOMMENDATIONS OF THE COMMITTEE:

D.P.I.'S REMARKS:

Resolutions:—

Specialised courses of study in aeronautics and Naval Architecture should be organised in the Presidency and that before formulating the details of the

The Director generally agrees with the Resolution and suggests that as regards Aeronautical course, the Director of Civil Aviation may

study, the requirements of Specialists by the Provincial and Central Governments should be assessed.

II. that Specialised branches of study should be allocated to the Engineering Colleges, Aeronautical and P.H. Engineering to be introduced in the College of Engineering, Guindy, Naval Architecture and Highway Engineering in the Engineering College, Vizag, Mining and Hydraulic Engineering in the Engineering College to be opened for the Ceded Districts - no other change.

III. The Organising Principal (Mr. Viswanath at present Principal Vizag, Engineering College at Cocanada) or any other suitable officer be deputed to select necessary equipment for the new Engineering Colleges and to study the latest developments in Engg. Science and teaching in foreign countries.

IV. (i) A basic course of 3 years instead of the existing 4 years course may be introduced for Civil, Mechanical and Electrical Engineering students.

(ii) The basic course should be the normal qualification for Govt. service.

(iii) The basic course should provide for a wide choice of optional subjects in the third year.

(iv) a post graduate course for one or two years should be provided on certain selected subjects.

V. A Standing Advisory Board of Technical Education be set up to advise Government on Technical matters.

be consulted as to the requirements of specialists in that branch.

The Director suggests that Aeronautical and Marine (Naval Architecture) Engineering be allotted to Vizag. Engineering College and that Highway Engineering need not be duplicated in both the Guindy and Vizag Engineering Colleges.

The proposal may be deferred for the present.

Director is against the proposal. In any case the University has to be consulted.

No remarks.

No remarks.

No remarks.

Recommends the proposal

Resolutions:-

Vi. T.A. may be paid to the non-official members of the Committee at the rates admissible to 1st Grade Govt. Officers, i.e. 1st first class fare.

Even before the receipt of the minutes, the C.E. addressed the Government in the matter. The D.P.I. also has recommended the proposal. It is being examined separately in consultation with Finance.

The recommendations of the Expert Committee are being examined separately. The answer may therefore be:-

"The Committee has submitted tentative proposals which are being examined by the Government."

(e) This is one of the recommendations of the Committee. But nothing can be said at the present stage whether the Expert Committee will be made the permanent Standing Committee of Technical Education.

(f) The question does not arise.

(h) The answer to the question may be "No". (It may, however, be noted that a proposal to transfer the management of the Engineering Colleges from the Education Department to the P.W.D. is under consideration).

(g) The answer may be "Yes".

The following types of Technical Colleges and Schools are under the control of the departments noted against each:-

Engineering Colleges at (Guindy, Coimbatore and Cocanada) ... D.P.I. Education Dept.

(Annamalai University) ... Engineering College, Annamalainagar.

Polytechnics & Technological Schools. Director of Industries & Commerce, Development Dept.

Sri. Alagappa Bhettiar College of Technology, Madras University of Madras

(i) The answer to the clause may be:-

"This is also one of the recommendations of the Expert Committee but a decision has not yet been taken on the question."

A draft answer is submitted. For orders as to circulation.

[I signed as S.P.A. u. o. 603104/ub-1 dated 26-10-46]

circulation.

A copy of the report of the Committee may be placed in this file for reference

26-10-46

4/ The Question lapsed, before it could be answered. The papers may be recorded.

22.12.47

13/29/47

23/12/47

G.O. 2750 Edu.
23-12-47

x ascertained from M.L. Sectt.
Abstract
Leg. Council En.-
Expert Committee for
Organising Engg
Colleges - Particulars
re-lapsed - Papers
recorded.

(8)
From the Director of Public Instruction, No. 59128501 K. 46, dated 4.10.46.
REFERENCE : - Government Order No. 1213, Education, dated 18.6.46.

I have the honour to submit herewith a copy of the minutes of the meeting of the Expert Committee held on the 5th and 6th July 1946 with the following remarks : --

Resolution I. -- While I generally agree with the Expert Committee about this resolution I would like to invite the attention of Government to the remarks found on page 10 of the pamphlet "Post-war Planning - Aeronautical Training and Education" published by the Government of India, Civil Aviation Directorate, which runs as follow

^{employment} "A University education alone is not a qualification for ~~employment~~ in Aviation, except in a relatively few purely scientific posts which occur in design offices, research laboratories and in the Universities themselves. These posts are rare in an early stage of development. Emphasis must therefore be laid on the need for combining university education with practical work and training and there is great scope for the development of scholarships of talent revealed either in technical training or in practical work. A University education in Aeronautics for a pilot of outstanding ability is a combination which will prove of value to the pilot and his employer - but generally speaking it is the pilot who is the more difficult to find. A University education has direct application to the work of the Aeronautical engineers in responsible positions including the Aircraft Inspection staff, but it cannot eliminate the hard grind of practical engineering training. In an expanding department of Civil Aviation there will be a need for a few University trained men in the Airworthiness department and for research and development work more closely related to their scientific and mathematical training. As the Aircraft manufacturing industry slowly grows through its advancing phases, there will be need for University trained men in the drawing offices and design departments. Graduates from Aeronautical courses at universities will frequently prove suitable for recruitment and training in the Civil Air Service Training School for a variety of executive posts. These are the prospective outlets for the product of the Universities. but it must never be forgotten that practical training and experience must be linked with education, if Indian aviation is to benefit".

On page 26 of the pamphlet in connection with the Aerodrome School proposed by the Govt. of India, it is stated that between 120 and 150 Aerodrome Officers will be needed to administer and control the air routes planned in India. It is estimated that half of these will be needed in the first two years after the war and the remaining within five years.

I would therefore suggest that the Director General of Civil Aviation may be consulted before final orders are passed by Government on this matter.

Resolution II. - I recommend that (1) Marine Engineering or Naval Architecture and (2) Aeronautical Engineering, if they are proposed to be started, should be started at the Engineering College, Vizagapatam, as originally decided by Government and that Highway Engineering need not be duplicated at Vizagapatam unless Govt. require very large numbers of Highway Engineers in the years to come.

Resolution III. As stated in my letter ROC. No. 337 AK/45 dated 9-7-1945, the question of deputing the Organising Principal or a suitable officer in the United Kingdom or U.S.A. may be considered later when found necessary.

Resolution IV. -- The Committee recommends that the basic degree courses in Civil, Mechanical and Electrical Engineering courses,

be reduced to 3 years instead of the present 4 years without in any way lowering the present standards. In the first instance I would like to remark that the University authorities will probably have to be consulted on this matter before any change can be contemplated. Further I would like to point out to Government that it is only in England the three-year course exists. In America it is a four-year course. The subject of engineering has become so vast that a four-year course as at present but with greater practical work in the colleges will probably be more advantageous to the country.

Resolution 7. - I recommend the resolution of the committee.

Resolution VI. I have already recommended the request of the expert committee - vide my letter R.O. No. 501K2/46, dated 5-9-1946 in reply to Govt. Endt. No. 41385 A/46-1, Education, dated 31-7-1946.

From the Chief Engineer, P.W.D. (General, Buildings and Defence),
dated 10.8.46.

I forward herewith the minutes of the meeting of the Expert Committee constituted by Government in G.O. No. MS. 1213 Edn. dated 18.6.1946 for working out details regarding the new Engineering College to be opened in the Province, and would request that Govt. accept the recommendations made by the Committee and take immediate steps to implement the suggestion particularly Resolutions III, V and VI.

I consider that it is highly desirable that the Organising Principal who is to be in charge of the Engineering College should be deputed abroad to select and purchase the equipment which will be necessary for the new College. I also consider that he should be deputed in the very near future whilst the engineering College already started to giving tuition in the first year. Any delay would mean that work of a more technical work nature would be going on in the College and it may not be so convenient to spare the Organising Principal's services later on. Also, in view of the present situation throughout the world, the sooner orders are placed for machinery and equipment, the sooner is it likely to be supplied. Even at the best, it is doubtful whether machinery and equipment can be made available within a year after placing the orders.

In recommending the name of the Organising Principal, I have taken into consideration that he is a comparative young man who will have 11 to 12 years still to serve in the Madras Educational Service, and the insight and information which he can get into the use of modern equipment and up-to-date teaching methods will thus be available for the new Colleges for a considerable time.

4. As regards resolution V. constitution of a Standing Advisory Board on technical education, this Board should not consist entirely of officials, although officials may be appointed to it, but should have members drawn from industrial concerns of all descriptions dealing with technical education.

5. As regards Resolution VI, I recommend, the Government accept this with retrospective effect, so we are obtaining the services of the Experts gratis and the least we can do is to see that they are not at a disadvantage in coming to attend the meetings.

6. As the next meeting of the Committee is likely to take place in the first week of September, it is requested that Government's orders on these minutes may be communicated to the Governor, the Organising Principal, by the end of this month.

MINUTES OF THE MEETING OF THE EXPERT COMMITTEE HELD ON THE 5TH AND 6TH JULY 1946, IN THE OFFICES OF THE CHIEF ENGINEER, P.W.D. MADRAS.

Present:-1.

(10)
The meeting opened with an introduction from the Chairman, in which he said that the last meeting held on 12th June was purely an informal meeting of the local members.

The first subject taken up was the question of specialised courses for the new Engineering College taking into account the course of studies in the existing Engineering Colleges.

A general discussion took place on the scope of employment of the Engineers that may be turned from the Madras Engineering Colleges in the future, it was pointed out that a knowledge of Government's postwar development programme and probable demand of engineers in the next ten or fifteen years was necessary to decide on the specialised courses that should be instituted and the number of seats to be allotted to different courses. In regard to the Aeronautical Course, the point was raised whether in view of the training given at the Indian Institute of Science in this branch and possible expansion of same in future, there is need for other institutions to run courses in Aeronautical Engineering unless the Government could arrange to absorb all the students that pass out there was no need for duplication.

In regard to Marine Engineering Course, Mr. Alexander said that the aim should be not a University Degree, but the D.O.T. certificate as this was the qualification required for employment at sea. It was pointed out that the practice in British Universities, was to run courses in Naval Architecture which was intended to train naval architects, The Royal Naval College at Greenwich and the Glasgow University were the main institutions. The opinion of the members was that the Committee should recommend to the Government the opening of courses in Naval Architecture instead of Marine Engineering.

Mr. F.H. Mc.D. Wilson, Superintendent Vizagapatam Port in a subsequent written note states

There will be in the near future a demand for Naval Architects in India. They will have to be capable of holding controlling positions in shipyards and designing offices, as managers or draughtsmen, they will be required for posts of ship surveyors under the Mercantile Marine Department or for service in the R.I.N. construction service. The syllabus will include survey and calculation of curvilinear areas, volumes and displacement centres of gravity, metacentric heights, moments of area, buoyancy, stability, inclining moments and inertia stability at large angles, cross curves of stability, inclining experiments calculating the effect of weights and strains experienced by ships, horse powers, the resistance and propulsion of ships, etc. He will be called on to know and understand the testing of all materials, classification societies rules, design of structure, sea-worthiness, features in the design of different types of vessels. He should know and recognise the principal structural members, the elements of structure and the details of structure. His practical experience should be in shipyard practice, in the marking punching, furnacing beveling and flanging of plates and the bending of frames. He should be conversant with the work of the mould loft, the transference of shapes from drawings to the scribe board, the netting out and marking off of templates, and the transfer of templates to the required plates angles or beams, etc. etc.

From the above brief summary of a Naval Architect student's needs, it will be seen that no great deal of special laboratory apparatus is required. Indeed with the exception of special charts and all diagrams and sectional models, the laboratory apparatus of the mechanical engineering department would suffice.

Dr. Harris stated that in the Indian Institute of Science the aeronautics Diploma course was a two year teaching course for engineering graduates. A few students, to be drawn mostly from Diploma holders, were now to be admitted for research, and would qualify for the Associateship of the Institute by thesis after a further two years or so (five terms). The Indian Institute of Science was intended for advanced study gradually and to restrict the more elementary study when possible. The two year Diploma course was undertaken in the absence of any basic degree courses in aeronautics in other institutions. In his opinion there is scope for instituting basic courses in Engineering Colleges; the latter would not compete with the Indian Institute of Science, but rather relieve it by serving as feeder institutions.

With regard to Aeronautical Engineers, Dr. Harris stated that judging from the experience of the passed students of the Indian Institute of Science, there was very little demand at present, but the future developments in Civil Aviation will create a large demand. It has also pointed out that Government of India are also planning a very large aeronautical institution to meet future demands.

Dr. Chatterjee supporting the above stated that we are mixing up two issues. He explained that a considerable part of unemployment is due to an unwarranted prejudice against the employment of University trained men arising out of designations like Ground Engineers etc. being given to men of the skilled mechanics and technicians class who are opposed to the admission of University men. He stressed that the issue of employment should not overweight the opening of essential nation-building activities. The future of the Indian Institute of Science will be more and more tenable confining in Advanced Study and Research Work and therefore there is scope for feeder institutions to run courses of study in Aeronautics.

Dr. K.L. Rao explained that due to wartime developments in the field of aeronautics, there is considerable quantity of specialised equipments available at the present moment, and that we should take advantage of this and start aeronautics course.

Mr. Lakka Raju Subba Rao on behalf of the Andhra University stressed the that the Aeronautics course was essential and that Vizagapatam was the ideal place for starting this specialised course. He pointed out that an Expert Committee of the Andhra University under the chairmanship of Mr. Phillipot had gone into this question and recommended the institution of Aeronautics Course in Vizagapatam. He further said that Govt. of Madras had approved the proposals.

Mr. Sundaram stated the whole question has to be based on the supply and demand. Until Government's post-war plans are known, it is not opportune to state how many colleges will be required and what courses should be instituted so as to produce the requisite number of specialised hands to fit in with the programme of post-war developments.

After summing up all the discussions, the Committee agreed that there is need for opening of specialised courses and resolved to recommend to the Government.

Resolution I. That Specialised Courses of study in Aeronautics and Naval Architecture should be instituted in the Presidency, but before formulating further details, the Central and Provincial Governments should be requested to communicate their plans for employment and the number of specialists that will be required.

II. That the allocation of specialised branches of study, taking into account the courses in existing engineering colleges, should be as follows

(a) That specialisation in Naval Architecture and Highway Engineering should be allotted to the Vizagapatam Engineering College. The details of the new branch of study, namely Naval Architecture should be drawn up only after a detailed knowledge of the organisation and working of similar courses in the leading U.K. and U.S.A. Institutions, is obtained first hand by the Officer charged with the duties of Organising the specialised course.

(b) That Mining Engineering should be allotted to Engineering College of Anantapur subject to the need for this specialised branch being established for post-war Developments and needs. The specialised course in Hydraulic Engineering is also recommended in view of the proximity of the Tungabhadra Project and facilities in this line.

(c) That Textile Technology and Automotive Engineering should be allotted to the Coimbatore Engineering College.

(d) That Highway Engineering and Public Health Engineering Courses should be allotted to the Guindy College.

(e) That Aeronautical Engineering should be allotted to the Guindy Engineering College.

Mr. Lakka Raju Subba Rao desisted from part (e) of the above Resolution. He expressed the opinion on behalf of the Andhra University that Aeronautical Engineering course should be allotted to the Vizagapatam Engineering College. His note on behalf of Andhra University is attached (Last page).

The next item discussed was equipment.

Dr. Rudra was opposed to the deputation of any one abroad for procuring the equipment as he said that there is no difficulty for any equipment except Machine Tools.

Dr. K.L. Rao stated that although standard lists of equipment for various Engineering Courses has been prepared by the Association of Principals of Technical Institutions in Great Britain, it will still be necessary for deputing the Organising Principal or a suitable officer to obtain personal knowledge of specialised equipment at work in Institutions abroad and to make personal contacts with suppliers in order to expedite deliveries.

After some discussion the Committee resolved : --

Resolution III. That the Organising Principal or a suitable Officer should be deputed abroad with powers to select and place orders for equipment so that in addition to expediting the supply of equipment for the Colleges, he should be given opportunity to study the latest developments in Engineering Science and Teaching in modern institutions abroad so as to enable him to shape the new Colleges along the latest lines of development.

1. Prof. A. Viswanath, Secretary and Convener.
 2. Dr. K. L. Rao.
 3. Dr. V. M. Ghatage.
 4. Sri Rao Bahadur A. R. Venkatacharya.
 5. Mr. F. H. Mc. D. Wilson.
 6. Prof. K. Sukumaran of Guindy Engineering College
 7. *Government Architect*
- (12) (12)
- } To be co-opted as members.

Dr. K. L. Rao has promised to procure standardised lists of equipment and plans as formulated by the Association of Principals of Technical Institutions in Great Britain for the use of the Committee.

Some members of the Committee raised the question of the inadequacy of Travelling Allowance granted. The Committee after discussions unanimously agreed that the grant of a single first-class fare was quite insufficient to meet train journey of members coming from outside. It was pointed out that Government was getting valuable advice of highly qualified experts for nothing and it was not proper that outside members should be put to incur expenditure from their own pockets in coming to give their advice.

The committee resolved to strongly recommend:

RESOLUTION VI. That in the case of members coming from outside Travelling Allowance as for 1st class Officer (at $1\frac{1}{4}$ first-class rates) should be allowed (for rail journey instead of the single first class now sanctioned), with retrospective effect from 1-7-1946.

The next meeting was agreed to be held after certain notes on staff promised by Dr. Rudra was circulated.

The meeting then terminated.

College of Engineering, |
Cocanada, D/8-8-1946 |

Organising Principal & Convener.

The question of staff was then discussed and it was decided to postpone this item for the next day. The meeting then adjourned.

ON THE 6TH JULY, 1946.

- Present:- 1- R. McIntosh Esq., Chief Engineer (General, Buildings & Defence)---Chairman.
2. Berry Esq., Chief Engineer, Madras & Maharatta Railway.
3. Dr. R. G. Harris, Professor, Aeronautical Engineering, Indian Institute of Science, Bangalore.
4. Sri Dewan Bahadur A. V. Ramalinga Ayyar, Retired Chief Engineer to the Government of Madras.
5. Sri Lakkaraju Subbarao, Representative of the Andhra University.
6. Sri S. Govindarajulu Naidu, Vice Principal, Law College, Madras.
7. Dr. V. M. Ghatage, Asst. Professor, Aeronautical Engineering, Indian Institute of Science, Bangalore.
8. Dr. K. L. Rao, Executive Engineer, P. W. D., Madras.
9. Mr. F. H. Mc. D. Wilsin Esq., Superintendent, Vizag Port.
10. Dr. J. J. Rudra, Principal, Arthur Hope College of Technology Coimbatore.
11. Sri G. Sundaram Chief Engineer for Electricity, Madras.
12. Prof. A. Viswanath, Organising Principal-Convenor.

THE first item considered was the institution of three years' basic degree courses in Civil, Mechanical and Electrical Engineering. The subject was ~~discussed~~ discussed at length in which some members pointed out the indispensibility of a four year course as at present. It was finally agreed that a three year course is possible without lowering the present standards, by more intensive work and increasing the working hours. The Committee, therefore, resolved to recommend to Government.:

- RESOLUTION IV: 1. That by intensive work and increasing the hours of work it is possible to provide basic degree courses in Civil Engineering, Mechanical Engineering and Electrical Engineering of three years' duration instead of the present four years, without in any way lowering the present standards.
- (ii) That the Basic Degree courses of three years duration should be the normal qualification for entry for Govt. and Public Services.
- (iii) That the Basic Courses mentioned above should provide a wide choice of optional subjects in the third year, so as to prepare the necessary ground work for such students as may desire to take any of the specialised post-graduate courses.
- (iv) That specialised post-graduate courses of study leading to a higher degree or diploma of one or two years duration according to the nature of the specialised courses should be organised in branches like Aeronautics, High way Engineering, Automotive Engineering, Naval Architecture, Public Health Engineering, Mining Engineering, etc.,

Mr. Sundaram raised the need for appointing a Standing Advisory Body to advise the Government on technical education in the Province in all its aspects. After discussions it was resolved to recommend to Government.

RESOLUTION V: That a Standing Advisory Board of Technical Education should be appointed with a view to advise Government of all matters of Technical and Technological Education on all types including University standard type, Diploma standard type and Artisan Standard type on a properly co-ordinated basis.

THE Committee next appointed a Sub Committee consisting of the following members to work out details of Buildings and Equipment for the new Colleges.

I submit that the following note be added to the minutes of the proceedings of the Expert Committee that met on 5th and 6th of July 1946 in Madras.

- I. THE Andhra University was the first to appoint a committee to draw up a report for the establishment of a Marine-(Naval Architecture) and Aeronautical Engineering College. It can be seen from the report circulated to the members that in the third year ~~there~~ will be some courses common for both and that in the fourth year there is complete separation.
- II. THE Government of Madras considered the report and decided in proceedings R.C.No. 337/45 dated 1-8-'45 that the college at Vizagapatam shall have the following courses (1) Civil (2) Mechanical (3) Electrical (4) Marine and (5) Aeronautical Engineering.
- III. THE Committee instead of implementing and supplementing the decision of the Govt. in the proceedings above referred to, have recommended that Aeronautical Engineering may be assigned to Guindy College. I respectfully submit that it is not within the purview of the reference made by the Government--It may lead to the appointment of additional teachers in Guindy for the purpose which can be avoided if it is Vizag.
- IV. Principal Rudra in a report submitted to the Government recommended that Public Health Engineering also should go to Vizagapatam, as a specialised course in Highway Engineering is started in Guindy College in 1945. He also recommended that power plant engineering (Thermal) should go to Vizagapatam. He also suggested that a special course in design and manufacture of measuring instruments might be had at Vizagapatam. Now instead of implementing the original order of the Govt. the Committee recommended the omission of the Aeronautical courses in Vizag. I may also state that Messrs. Rudra and Ghatage who are in this Committee served on the Andhra University committee and recommended Aeronautical to go with Marine. I therefore strongly urge that Aeronautical Engineering may be allotted to Vizag.
- V. FURTHER the Honourable the Minister for Education on the occasion of the opening of the Vizagapatam Engineering College at Cocanada on 16th July, stated thus "The main subjects that will be taught in this college are Marine and Aeronautical Engineering in addition to the usual courses of study in Civil Mechanical and Electrical Engineering. Vide Hindu dated 17th July, 1946. The Committee is requested to revise its recommendations accordingly.

sd/.I. Subbarao.

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