

Minutes of the 6th meeting of the Council of Indian Institutes of Technology.

The sixth meeting of the Council of Indian Institutes of Technology was held in Vigyan Bhawan, New Delhi on the 9th October, 1967 at 10.30 A.M.

The following were present:

- 1. Dr. Triguna Sen, Chairman.
- 2. Dr. Atma Ram
- 3. Shri G.M. Chandiramani,
- 4. Shri G.R. Damodaran,
- 5. Shri F.N. Katju,
- 6. Mr. H.K.S. Lindsay,
- 7. Shri G.L. Mehta,
- 8. Dr. A.L. Mudaliar,
- 9. Prof. M. Mujeeb
- 10. Shri G. Pande,
- 11. Shri Padampat Singhania,
- 12. Shri Suraj Bhan,
- 13. Prof. S.K. Bose,
- 14. Prof. R.N. Dogra,
- 15. Dr. P.K. Kelkar,
- 16. Prof. V.N. Prasad,
- 17. Prof. B. Sen Gupto,
- 18. Shri G.N. Vaswani, Secretary.

Shri L.S. Chandrakant was present by invitation.

The following regretted their inability to attend:

- 1. Dr. S. Bhagavantam,
- 2. Shri Bharat Ram,
- 3. Prof. Chandrasekharan.

4. Prof. R. Choksi.
5. Dr. S. Dhawan.
6. Dr. D.S. Kothari.
7. Sir Biren Mukherjee.
8. Shri Kartik Oraon.
9. Prof. M.S. Thacker.

The Chairman welcomed the members and stated that it was an honour to anyone to preside over the deliberations of this distinguished body. He further stated that the honour was the greater since he had spent practically all his professional life in technical education and he was keenly interested in the development of the Institutes of Technology. Since 1951 when the Indian Institute of Technology Kharagpur was established the family of Indian Institutes of Technology had grown steadily and almost reached full maturity. The original plan of the Sarkar Committee had envisaged for the Institutes a distinctive role in training of high-grade engineers and technologists. At that time, there were practically no facilities in the country for post-graduate studies and research in engineering and technology. Besides, the number of institutions as well as annual admissions was limited. Since then, there had been a phenomenal expansion of technical education at all levels. Keeping this in view, he felt that the Indian Institutes of Technology were not performing any exclusive functions. It was necessary for the institutes to make decisive impact on the development of engineering education all

over the country and the Institutes should continuously work for distinctive role and help in the development of faculty and curriculum and manufacture of equipment for technical institutions.

A copy of his Address is given at Annexure 'A'.

The Chairman then requested the members for a general discussion on the suggestions made by him in his Address.

Dr. Madalier stated that he appreciated the efforts made by the institutes and suggested that while Indian Institutes of Technology could impart under-graduate education which would serve as a model the institutes should really concentrate on the development of post-graduate education and training of faculty. The role of the institutes at the undergraduate level should serve only a model and give leadership to other technical institutions. The institutes should also give leadership in designing and production of equipment required by technical institutions. They should also help in developing and providing ideas to technical institutions and arrange seminars with the industry etc. for the benefit of faculty members of Engineering Colleges.

Shri G.L. Mehta stated that the guidelines given by the Education Minister deserve careful consideration of the Boards of Governors the Directors and other authorities connected with the institutes. He desired that the institute should make a decisive impact on the

total engineering education in the country. He further stated that he was somewhat disappointed because when the institutes were started the idea was that very few students should go abroad for higher studies and the standard of education should be on par with the foreign institutions. What had disappointed him was that immediately after graduation students were going abroad in large numbers. He therefore suggested that we should do something to see that we raise the standards sufficiently high so that many students do not go abroad for higher studies. He felt that there was no simple solution but this was one of the main problems which needs due consideration. He said that in 1952 there were about 1400 or 1500 students in the USA. But today they are in the neighbourhood of about 9000 students. He further stated that institutions should seriously consider the question of developing postgraduate studies and not undergraduate studies which can be done by other institutions. The Institutes should concentrate largely on post-graduate education and also help in the development of postgraduate teaching in other colleges. This, however, should be done in a very tactful manner. He endorsed the suggestions of the Chairman that the institutes should pool resources and energies and undertake a comprehensive programme for curriculum and faculty development for the benefit of all the engineering colleges. He also stated that there was some liaison between industry and

institutes, but with a view to achieving greater cooperation between them a lot has to be done in this direction. He suggested that faculty members should undertake to a limited extent work at the instance of industry on payment.

Shri Padampat Singhania also endorsed the idea that efforts should be made to stop Indian students from going outside the country by improving the standards of higher education. The institutes should consider ways and means of attracting more specialists on their faculty. He felt that quite a large number of items of equipment can be manufactured by proper coordination and cooperation between industry and the Institutes.

Mr. Lindsay suggested that the Applied research, curriculum development and faculty development are positive efforts and should provide more opportunities for cooperation between industries and institutions. With a view to providing practical education and improvement in teaching, special efforts may be made to provide consultation work to the faculty members and provide persons from industry opportunities for teaching and thus bringing the industry and teaching institutions together.

Sari Katju stated that the Chairman's suggestions will receive due consideration and will be implemented by the Directors. He felt that industrialists were far too clever and they were taking full advantage of the

facilities that the institutes were able to provide.

About the consultancy work he warned that while this should be encouraged between the institutes and the national laboratories on the one hand and the industry on the other but the consultancy by individuals was an entirely different thing and may be properly regulated.

Shri Damodaran said that he was happy to get all the help from the Indian Institutes of Technology and he was getting the necessary assistance as and when needed from the Indian Institute of Technology Madras.

Shri Bose also gave instances of his institute and the other institutes as to how they were developing liaison between the industry and the institutes. They were taking steps for development of curriculum, faculty and also arranging seminars in cooperation with industry for the benefit of technical institutions and industry. They were also undertaking research sponsored by industry.

After the general discussions the agenda was considered.

Item No. 1: To confirm the minutes of the 5th meeting held on the 14th October, 1965.

The minutes were confirmed.

Item No. 2:- To report the action taken on the minutes of the fifth meeting.

The report was recorded. The Council, however, suggested that the Institutes should prepare reports regarding the number of students of the institutes.

proceeding abroad and also the employment position of the alumni. The reports be circulated to all the members.

Item No.3:- To report the present state of development of the Institutes.

The Report was recorded.

Item No.4:- To report the acceptance of the Second and Final Report of the Rationalisation Committee by the Chairman of the Council.

The Report was recorded.

The Director of the Indian Institute of Technology Bombay, raised the question of appointment of a full-time placement and Training Officer. The Rationalisation Committee had considered this matter and in its first report recommended that no separate cadre for Placement and Training need be created as this was <sup>a</sup>function which each Professor was expected to perform and if need be a separate Professor for Training can be appointed. The Committee also suggested that this function may be entrusted to one of the younger Professors by rotation and for this extra responsibility, a suitable allowance of about Rs.200/- be given. The Council had approved this report at its 4th meeting held on 6.10.1964. In view of the position explained by the Director I.I.T., Bombay, stressing the need for a full-time Placement and Training Officer, the Council decided that the question of appointment of a full-time or part-time Training and Placement Officer should be left to the discretion of the Board of Governors of each Institute.

Item No. 5(1)

To report the nomination by the Chairman of the Council of four persons, as required under Section 11(d) of the Institutes of Technology Act, 1961, on the Board of Governors of each of the Indian Institutes of Technology Kharagpur, Bombay, Madras, Kanpur and Delhi.

Recorded.

ii) To report the nomination of Sir Biren Mukherjee as Chairman, Board of Governors Indian Institute of Technology, Kharagpur.

Recorded.

iii) To report the election of two members on Council by the Fourth Lok Sabha on the dissolution of the Third Lok Sabha as a result of the last General Elections.

Recorded.

Item No. 6:

To review the question of extension of service or re-employment of the employees of the Institutes of on superannuation.

The Council recommended that non-academic staff should not be given extension or re-employed beyond the age of 60 either on permanent or on temporary basis. The academic staff may be given extension or re-employed ordinarily on a year to year basis up to the age of 65 years but in exceptional cases up to three years on block basis in the first instance and for a period of two years thereafter. Prior approval of the Visitor should obtained for every extension and/or employment beyond the age of 60 in respect of both the permanent and temporary employees.



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Item No. 7:- To consider the following matters concerning the Joint Entrance Examination of the Institutes.

- A. Procedure to be adopted in regard to the admission of students applying from abroad.
- B. the question of continuance or otherwise of the London Centre

(a) The Council decided that students admitted against reserved seats need not appear for the Joint entrance examination. The Council also decided that the question of admission of Indian and foreign students living abroad should be considered on the basis of individual merit and performance at the qualifying examination. The Council further recommended that pre-requisite courses for foreign students may be arranged wherever necessary.

(B) Since the question of admission of Indian students living abroad will be considered on the basis of the performance at the qualifying examination, the Joint Entrance Examination at London Centre may be discontinued.

Item No. 8. To consider the recommendations made by the Institute of Applied Manpower Research in their First Report of Engineering Manpower Survey and to report the views of the AICTE thereon.

The report of the Institute of Applied Manpower Research was recorded. The Council suggested that the Institutes should make efforts to organise cooperative courses wherever possible.

Item No.9: To consider the directives of the Ministry of Home Affairs for reservation of posts for absorption of personnel discharged from the Military service.

The Council recommended that reservation for discharged military personnel may be made for non-academic posts only and not for academic posts.

Item No. 10: To consider the new proposals from the Institutes.

- 1) Institution of Loan Fund Scheme for the benefit of the needy students (IIT Delhi)

The Council was informed that some of the State Governments were not giving loans to students of institutions outside the State. The Council therefore recommended that the scheme of National Loan Scholarships should be examined and appropriate instructions given to the State Governments to give loans to the eligible students of the institutions outside the State.

Item No. 11: To lay down the procedure in respect of application for employment/fellowships etc., abroad, by the employees of the Institutes.

The item was withdrawn.

Item No. 12: To consider the question of recruitment of staff through Employment Exchange.

The Council recommended that the question of recruitment of administrative and other non-academic staff may be entrusted to the Employment Exchanges as an experimental measure for a few years. If the procedure does not work satisfactorily the Institutes may revert to the present procedure of recruitment.

Item No. 13: To report the general decision taken by the Government on the question of the award of Scholarships.

The Council was of the view that there should be some provision for merit scholarships irrespective of the income of parents. The Council however recommended that in view of the present decision the Government of India that no scholarship be given to the students whose parents' income is over Rs. 500/-, only merit-cum-means scholarships be awarded to 25% of the students. The Council also recommended that the institutes should review the scheme and formulate proposals for award of scholarships, and follow a uniform procedure.

Item No. 14: To consider the revised estimates for 1967-68 and budget proposals for 1968-69 of the Institutes and to recommend to the Central Government the funds to be allocated in 68-69.

The Council approved the revised estimates for the year 1967-68 and the Budget Estimates for 1968-69 and recommended that the Central Government may allocate funds to the institutes accordingly. The Council also recommended that the maintenance cost for student for each institute should be worked out and reported to the Council at its next meeting.

Item No. 15: To consider the views of the Directors of the Indian Institutes of Technology on the question of admissions to the under-graduate courses.

The Council noted the views of the Directors regarding admission to the undergraduate courses and

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suggested a further study of the admission procedures. The Council also endorsed the recommendation of the Directors that upto 10% of the seats be reserved for top students passing the examinations conducted by the various Examining Bodies/Boards. Such of the students who do not qualify at the Joint Entrance Examination of the Institutes may not be admitted.

The meeting terminated with a vote of thanks to the Chair.

CHAIRMAN'S ADDRESS

Sixth Meeting of Council of the Institutes of Technology  
ON  
9th October, 1967.

I have great pleasure in welcoming you to this the sixth meeting of the Council of the Institutes of Technology. It is an honour to any one to preside over the deliberations of this distinguished body. To me personally, the honour done is the greater since I have spent practically all my professional working life in technical education, and I am keenly interested in the development of the Institutes of Technology.

Since 1951, when the Kharagpur Institute was established, the family of IITs has grown steadily and almost reached full maturity. The admissions to the Institutes at present are 1690 students to undergraduate courses in engineering and technology and 730 students to postgraduate courses. The budgetary allotment for the institutes has touched the nine-crore-rupee-level on the basis of this year's financial provision. Therefore, I hope you will agree with me that the stage has come when we should identify the new directions in which the Institutes should move forward and the role that they should play in helping our country to meet the challenges of today and tomorrow.

To reflect back on the original plan of the Institutes, the Sarkar Committee in 1946, had visualised for the Institutes a distinctive role in training high-grade engineers and technologists needed for our country's development. At that time, there were practically no facilities in the country for

postgraduate studies and research in engineering and technology. The number of institutions for the first degree courses was also extremely limited since there were only about 30 engineering colleges with an annual admission capacity of about 3000 students. The Sarkar Committee therefore conceived the Institutes of Technology not only as centres of advanced studies and research in engineering, but also as institutions that must train engineers at the first degree level to augment the manpower resources in the country. Since then, as you all know, there has been almost a phenomenal expansion of technical education in the country at all levels. Today, we have over 130 first degree institutions with an admission capacity of about 24,000 students each year. Under a comprehensive programme of postgraduate engineering education, as formulated by the Thacker Committee, we have developed, in addition to IITs, a large number of institutions for Master's degree courses in engineering and Technology. Provision has been made for the admission of about 23000 students each year to postgraduate courses. Some of the institutions engaged in postgraduate engineering education today have had long traditions in technical education in our country. In quantitative terms, as against about 24,000 admissions to the first degree courses, the IITs account for about 1600 admissions or seven per cent. At the postgraduate level, as against 23,00 admissions, the Institutes of Technology account for 730 admissions, or 32 per cent.

This broad review of the technical education scene

would suggest that, notwithstanding what the Sarkar Committee had visualised, the IITs are not performing any exclusive functions. Some other institutions developed on the recommendations of the All India Council for Technical Education are also engaged in <sup>a</sup> big way in advanced engineering studies and research. It is, nevertheless, true, and we are all gratified to know it, that the Institutes of Technology have earned for themselves a high reputation for quality and standards that should spur them to higher peaks of excellence. It is in this context, and also in the context of the big investments that have been made for the IITs that we should consider the future role of the Institutes. I would request the Council to earnestly consider this matter, and extend to me personally, and to the Central Government the benefit of its valuable advice and guidance.

If I may share some of my ideas with you, it is important and necessary for the Institutes of Technology to make a decisive impact on the total engineering education situation in the country. It would not be enough for the Institutes to remain merely as centres where students of merit could go to study the conventional degree programmes at the undergraduate or postgraduate level. The Institutes should reach out to help other engineering institutions in their respective areas to attain higher standards. As a logical sequel, the Institutes should assume new responsibilities and functions that cannot obviously be undertaken by other colleges and pledge their resources to fulfilling those future needs of the country that can only be dimly visualised at this stage. What I wish to emphasise is

that the family of IITs should continually work for a distinctive role for its members after taking into account the changing situations in the technical education field.

How is this new role to be indentified? First, the Institutes should concentrate their resources and energies on postgraduate studies and research and in doing so, they may even reduce their responsibility for undergraduate courses, since the latter could well be taken care of by the large number of engineering institutions now functioning in the country. At the postgraduate stage, the Institutes should try to establish and demonstrate the highest standards possible and relate their courses to the needs of the country's technological development. They should emphasise applied research that has a bearing on the development of our industry, agriculture, transport and communications and other aspects of economic life. Second, the Institutes should work for upgrading and improving teaching in our engineering colleges. To this end, the Institutes should devote their energies to the maximum extent possible to faculty development through a wide range of programmes of inservice training, summer institutes, pre-service training of teachers and so on. Each Institute should help a fair number of colleges in its area through a cooperative or sisterhood arrangement. Third, the IITs should pool their resources and energies, and undertake a comprehensive programme of curriculum development for all engineering institutions. A piece with curriculum



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development, is the need to produce textbooks, teachers guides and various kinds of instructional materials to help serving teachers and students. This, to my mind, is a vast and important field in which our IITs should play a leadership role.

We have discussed often both in the All India Council for Technical Education and elsewhere the urgent need for our technical and technological institutes, to be self-sufficient in scientific equipment and apparatus. Unfortunately, however, little practical effort has been made so far to design and produce within the country such apparatus and equipment. It has almost become a fashion with us to speak of self-sufficiency in one breath and in another, to ask for more foreign aid. The time has come when we should translate our professions into practical and concrete achievements. I see no reason why our Institutes of Technology with the vast and available resources that they possess, should not undertake on a priority basis the design and fabrication of essential equipment and apparatus that hundreds of our engineering institutions urgently need. I do not subscribe to the view that the legitimate function of the IITs is only to teach, and not to enter into industrial activity. In a critical situation like the one that our country faces, there is no room for a philosophic approach to the jurisdictional responsibilities and functions of our scientific and technological institutes. What will happen if all imports were stopped and we were asked to make do with what we have and what we can produce? Surely, we will not lean back in our

chairs and plead helplessness. We must flex our muscles and press on with our work with a sense of determination and urgency.

I feel that it is only through continuous evaluation and assessment of the problems of engineering education in relation to our economic development and through collective and concerted action that the Institutes of Technology will be able to make a big impact. I would request you to give your earnest consideration to these problems and suggest the new directions in which the IITs should move forward in the years ahead.

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