

INDIAN INSTITUTE OF SCIENCE

BANGALORE 3

VIEWS OF THE COUNCIL
ON
THE REPORT
OF THE
REVIEWING COMMITTEE, 1955

BANGALORE CITY
PRINTED AT THE BANGALORE PRESS, MYSORE ROAD
1957

LIBRARY & DOCUMENTATION CERTIFICATE

National Institute of Educational
Planning and Administration.

U-3, Sri Aurobindo Marg,

New Delhi-110016

DOC. No. D-11071

Date..... 24-04-2001

APPENDIX A

(to the Council Minutes of 17th July 1957)

Subject: Indian Institute of Science—Report of the Reviewing Committee, 1955

In letter No. F. 8-29/56-T. 1 dated 31st July 1956 from the Ministry of Education, Government of India, it has been indicated that the Visitor desired to have the views of the Council of the Institute on the various recommendations made by the Reviewing Committee set up by him during 1955. Accordingly, the Council begs to submit the following views and observations for the Visitor's consideration. The Council is thankful to the Visitor for giving it an opportunity to consider the Report and to express its views thereon.

At the outset, the Council desires to place on record its appreciation to the Chairman and members of the Committee, for the thought and labour that they have given to reviewing the work of the Institute during the previous quinquennium and making recommendations for its future.

In formulating its views on the Report of the Committee, the Council has had the benefit of a discussion on several matters of policy at the meeting of the Court on 16th March 1957, and also of the views of the Senate of the Institute on the various questions dealt with by the Committee and its recommendations.

Section I.—General Approach and Summary of Principal Proposals

As mentioned by the Committee, the Government of India has been an active and generous supporter of the advancement of science and engineering. The Council is grateful to the Government for the continued active interest and support that it has given to the Institute particularly during the last decade.

Paras 10-11

The Council agrees with the Committee that the existing facilities of the Institute should be utilised to the utmost in promoting research and post-graduate instruction and that in consolidating the present activities and utilising the existing facilities, additional facilities where necessary should be provided. The Council agrees that the coming quinquennium should, broadly speaking, be a period of consolidation. In view, however, of the development contemplated in the country in the economic sphere, the Institute should undertake such further developmental programmes which it may be called upon to do and which have a direct bearing on the requirements of the Five Year-Plan.

Proposed Increase in Number of Students.—To achieve this objective, the Council realises the importance of having in each department of the Institute a much larger number of students than at present. It is true that in recent years, there has been a decrease in the number of students at the Institute; this is due, in the view of the Council, amongst other causes, to (a) the establishment of new institutions for research and advanced instruction, (b) improvements in and expansion of the instructional and research facilities at the various universities and other existing educational establishments, and (c) the lack at the Institute of an adequate number of scholarships of sufficient value as would attract and retain students of high calibre and qualifications.

Paras 13-21,
71-74

Scholarships.—The Council, therefore, welcomes the recommendation of the Reviewing Committee for instituting a large number of scholarships of adequate

NIEPA DC



D11071

value for both research students and for students pursuing courses of instruction at the Institute. For this purpose, the Committee has recommended an additional annual financial provision rising up to Rs. 6,41,000 by 1960-61 (page 61 of the Report). The Council, however, desires to make the following suggestions regarding the number and the amount of scholarships in place of those recommended by the Committee:—

Scholarships for Research Students.—The Committee has recommended (para 72) that research students in the Science Faculty should be given scholarships tenable for three years, each of the value of Rs. 150 p.m. in the first year, Rs. 175 p.m. in the second and Rs. 200 p.m. in the third. For research students in the Engineering Faculty, it has suggested scholarships of Rs. 200 p.m. tenable for two years. The number of scholarships to be 80% of the students admitted.

In place of these, the Council recommends scholarships each of the value of Rs. 200 p.m. for post-Associateship and post-M.Sc. research students in the Science Departments and post-B.E. research students in the Engineering Departments, to the extent of 80% of the number of students recommended for admission by the Reviewing Committee. These scholarships are to be awarded on the basis of merit. The Council also recommends the institution of six post-Doctoral Fellowships at Rs. 350 p.m. each.

It is understood that hereafter the universities will award the M.Sc. Degree by examination only and stop the present practice of awarding it for research. The Council, therefore, recommends that admission for research should be granted only to those who possess the M.Sc. Degree.

If during the transitory period first class B.Sc. students continue to be admitted for research, the Council is of the view that these students should not be awarded scholarships during the first year of their work, and that they become eligible for the award of scholarships of Rs. 150 p.m. during the second year and Rs. 200 p.m. during the third year and onwards. In the case of B.Sc. (Hons.) (3-year course) students, they should be eligible for scholarships of Rs. 150 p.m. in the first year and Rs. 200 p.m. from the second year onwards.

Scholarships for Students of Post-Graduate Courses.—The Committee has recommended (para 71) that all the students admitted to the post-graduate courses in Power Engineering, Internal Combustion Engineering and Aeronautical Engineering should be offered scholarships of Rs. 200 p.m. and that 80% of the students pursuing other post-graduate courses should be offered scholarships of the same value.

The Council agrees with the recommendations of the Committee above but suggests that 60% of the scholarships should be financed out of Institute funds and that the remaining 40% should be obtained from other sources such as State Governments and Industries.

Scholarships for Students Pursuing Courses of Instruction in Electrical Technology, Electrical Communication Engineering and Metallurgy.—The Committee has not made any recommendation for scholarships for students pursuing these courses. The Council suggests that in these cases, scholarships each of Rs. 75 p.m. be provided for 25% of the strength recommended for admission by the Committee.

The Council agrees with the Committee (para 74) that outside bodies instituting scholarships should be requested to increase their value to the same level as that of the Institute scholarships.

The Council is confident that with the proposed increased number of students in all the departments at the Institute, the research output will grow both in quality and in volume, and that the Institute will meet increasingly the growing needs of the country for scientists and engineers.

Improvement in the Technical Resources of the Institute.—The Council welcomes the emphasis placed by the Committee on the importance of designing and fabricating at the Institute the specialised instruments, apparatus and equipment required for instruction and research in the various departments of the Institute. The Council, therefore, agrees with the recommendations of the Committee that the facilities for such work should be augmented wherever necessary, particularly the recommendation for the provision of adequate facilities for advanced practice in glass-blowing and high vacuum techniques.

Paras 22-25

Central Instruments and Services Laboratory.—The Council agrees with the principle of centralisation, but feels that certain instruments that have been already kept and maintained in the various departments where they are most needed and used be continued to be retained in the respective departments.

Paras 108-113,
120

In future, instruments which involve large capital expenditure and which are of a character that can be used by several departments should be centralised.

As several departments are in need of routine analytical work which cannot be undertaken in the departments themselves, the Council recommends that an Analytical Laboratory attached to the Department of General Chemistry be set up. The Council is examining the requirements and will put up separate proposals.

Central Glass Blowing Shop.—The Council welcomes the recommendation of the Committee for the establishment of a well-equipped Central Glass Blowing Shop.

Paras 114-116

Central High Vacuum Service Unit.—The Council agrees that facilities for high vacuum work should also be provided.

Paras 117-119

The Central Workshop.—In para 105 of the Report, the Committee has recommended that the Central Workshop at the Institute should be placed under the Department of Industrial and Production Engineering proposed to be created by the Committee. The Council does not agree with this recommendation and considers that both the Central Workshop and the Instrument Technology Section should continue to be under the Section of Mechanical Engineering of the Department of Power Engineering.

Para 105

The Council agrees with the Committee that in order to improve the service that the Central Workshop can give to the departments, it should be provided with some additional machine tools and additional staff, and that the salary scales of the Foreman and the Mechanics of both the Central Workshop and the departmental workshops should be raised as suggested by the Committee (Para 124).

Paras 123-126

The Council agrees that the Central Workshop should be given a permanent stock of materials and that while the Workshop may charge the cost of materials to the departments for departmental work, the cost of labour should not be charged (Para 125).

Central Stores Organisation.—The Council is in agreement with the Committee that the Central Stores should continue and that its organisation should be strengthened so that it can give prompt and effective service to the departments in supplying stores. The Council agrees with the proposal of the Committee for

Paras 100-104

locating both the Engineering and the Chemical Stores together. The Council also agrees that the Central Stores should be provided with additional staff.

General Appraisal of the Work of the Departments

Paras 29, 30

The Council generally agrees with the views of the Committee.

The Council also agrees with the Committee that members of a team should be permitted to submit results of allied investigations as part of a thesis, in addition to matters describing the more important work done in collaboration.

The Council does not agree with the statement of the Committee (Para 31) that there has been little co-operation between the departments of the Institute. Such co-operation has always existed, and indeed the daily work of the Institute could not be carried on without such co-operation. The Council, however, appreciates the need for closer and more effective collaboration in the prosecution of well-considered programmes of instruction and research.

While the Council notes the emphasis placed by the Committee that the next five years (Para 11) should be a period of consolidation, the Council considers that a dynamic approach should be made to the future working and activities of the Institute.

In this connection, the Senate has under active consideration schemes of instruction and research, some of which are being dealt with by individual departments and the others by collaborative effort amongst a number of departments of the Institute. These are based for the most part on the suggestions made by Mr. J. R. D. Tata, President of the Court. As indicated earlier, these are schemes of importance to the country in connection with the Five-Year Plans.

The Committee has recommended (Paras 32, 64) that an annual amount of Rs. 1,00,000 to be raised in due course to Rs. 2,00,000 be made available to the Director for timely and adequate assistance to new developments at the Institute. The Council recommends, however, that this sum should be limited to about Rs. 30,000 annually for the next few years.

The Council further recommends that a provision of Rs. 60,000 per year be made for creating supernumerary posts for periods not exceeding three years to make use of the available talent for developing useful lines of activities in the various departments.

Paras 32-34

The Council agrees with the Committee that to encourage closer contacts between members of the different departments, certain amenities should be provided.

Paras 35-42,
241-242

Relations with Industry.—The Council recognises the need for and the importance of strengthening public relations in order to bring to the attention of the public and particularly of the governments and industrialists, the objects for which the Institute has been founded, its work and activities, and the facilities it has for instruction and research. The Council is anxious that the facilities of the Institute should be utilised to the maximum extent for the best advantage of the country. For this purpose, various measures have been introduced; one of these is that an Annual Week has been organised when the laboratories are thrown open for visits by the public, particularly industrialists, scientists, engineers and students.

In addition, closer relationship with industry is sought to be established by inviting experts in industry to lecture to students in the subjects of their specialisation, and to conduct and take part in symposia, seminars and residential study courses.

As suggested by the Committee, the Institute should also run refresher courses for technical men in industry. It is also desirable that the members of the staff of the Institute should visit and if necessary work in industrial and engineering establishments for suitable periods. For this purpose, the Council recommends an annual provision of Rs. 25,000.

Organisation and Administration including Director

The Council agrees with the Committee that the Director should not be the Head of any Department and that he should be a man of established scientific reputation and wide scientific interests. The Council, however, does not think that he should necessarily be "no longer seriously concerned with his career as a scientist". In the opinion of the Council, an active research worker with an established scientific reputation and wide interests should be preferred and should be provided with facilities for research in his own field of specialization.

**Paras 43-48,
65-67**

The Committee has recommended that steps should be taken to reduce and simplify the administrative routine, including the delegation of powers. The Council has taken steps in this direction from time to time and will examine the position further.

In regard to what the Committee says in paragraphs 65 and 66, the Council is not aware of any case of an Assistant Professor or any other member of staff who has been denied freedom and facilities to develop the lines of work in which he has a special aptitude, and no such case has been brought to its notice. The remedy suggested by the Committee to meet such a situation will, in the opinion of the Council, undermine discipline.

In regard to the Group II staff, there is adequate protection in the present Regulations by way of a right of appeal to the Council.

Work of the Authorities of the Institute

The Committee has made certain suggestions for alterations in the composition of the Court and the Council. The Council has given careful consideration to them and is of the view that the present composition of these two bodies should continue without alteration.

While it may be true that the Court has not been very active till now, steps have been taken so that it may play a more effective role in the work and progress of the Institute. It is hoped to have at least two meetings of the Court in a year.

The Council recommends that the constitution of the Senate and the Faculties be as under:—

Paras 60-62

The Senate

The Senate shall be the academic body of the Institute and consist of:—

- (i) The Director (*Ex-officio* Chairman).
- (ii) All Professors (including Visiting Professors).

- (iii) Heads of Sections or such members of the staff, if any, as are placed in charge of the duties of the Head of the Department/Section for the time being.
- (iv) Two Assistant Professors, one from the Science Faculty and the other from the Engineering Faculty.
- (v) The Librarian.

The Registrar shall be the *Ex-officio* Secretary of the Senate; in the absence of the Registrar, the Assistant Registrar shall be the Secretary of the Senate.

The Faculties

There shall be two Faculties in the Institute, *viz.*, the Science Faculty and the Engineering Faculty.

Membership.—All the members of the staff holding the rank of Assistant Professor and above, including the Visiting Professors, shall comprise the Faculty.

The Professors of Chemical Technology and Chemical Engineering, Applied Mathematics, Electrical Communication Engineering and of Industrial Engineering and Administration shall be entitled to attend meetings of both the Faculties.

The Librarian shall be a member of both the Faculties.

Deans.—Each Faculty shall have a Dean as its Head. All Professors in the Institute cadre shall be appointed Dean of the appropriate Faculty by rotation in order of seniority of service, preference, however, being given to those Professors as had not held this office even once. Every Dean so appointed shall hold office for one year at a time.

The Assistant Registrar shall be the *Ex-officio* Secretary of the Faculties.

The Council does not agree that the admission of students should be transferred to the Faculties. It is of the opinion that the powers and duties of the Senate and the Faculties should, for the present, remain unchanged.

Measures Relating to Students

Paras 68-85

Conferments.—The Reviewing Committee has recommended the institution of degrees similar to those awarded by the universities. The Council agrees with this recommendation and in order that the Institute may be enabled to confer such degrees, it is of the opinion that the Central Government may, in consultation with the University Grants Commission, declare by notification in the Official Gazette, that the Indian Institute of Science, Bangalore, is an institution for higher education in accordance with Section 3, Chapter I of the University Grants Commission Act of 1956 and thus be deemed to be a university for the purposes of the said Act.

The Council, in requesting the Central Government to take this step, desires also that the following arrangements be acceded to and implemented:—

- (i) that the annual recurring grant that may be decided upon by the Central Government after consideration of the Reviewing Committee Report, 1955, and the views of the Council thereon be continued to be given as a block grant through the University Grants Commission; and

- (ii) that as the Indian Institute of Science has been so far receiving most of its grants from the Ministry of Education and other Central Ministries, it be also agreed that in case the University Grants Commission considers fresh proposals, the matching grants, if any, relating to such proposals be also paid to the Institute by the Central Government.

Student Amenities.—With the recommended increase in the number of students to be admitted both for research and to the various courses of instruction, the Hostel accommodation will have to be increased and the Council agrees with the Committee that the Hostel should be expanded to accommodate another 100 students. For this, an interest-free loan of Rs. 3,00,000 will be necessary. The Committee has not included this financial provision in its recommendations. Para 75-82

The Committee has recommended a non-recurring grant of Rs. 50,000 for introducing the cafeteria system, for electrifying the kitchens, the provision for refrigerators and of stainless steel utensils in place of crockery, etc. If this recommendation is to be implemented, the Council considers the amount indicated as inadequate.

Gymkhana.—With the increased number of students, additional playgrounds and Gymkhana rooms will also be necessary.

The Council is in favour of increasing the rate of subscription by members of the Gymkhana from the present figure of Rs. 8 to 12 per annum. The Council agrees to contribute Rs. 12 per member annually to the Gymkhana. Para 81

Employment Board.—The Council agrees with the Committee that assistance to students in securing suitable employment is best given by the Heads of Departments/Sections concerned and that there is no need for an Employment Board at least for the present.

Fees.—The Council agrees with the Committee that the research students and those pursuing courses of study should continue to pay tuition fees as at present.

Measures Relating to Staff

The Council agrees with the suggestion of the Committee that the Council should be free to decide in each individual case below that of a Professor, whether it shall advertise a particular post or fill it by internal promotion, but in either case the normal *Ad Hoc* Committees for appointments shall function. Para 86-87

The Council does not agree that the recommendations of the *Ad Hoc*/Selection Committees should be unanimous. Para 88

Salary Scales.—The Council recommends the creation of selection grade Professorships in the scale Rs. 1,600–100–1,800, the number of such Professorships at any time not exceeding one-third of the total cadre. Paras 90-91

The Council recommends the following grades for the undermentioned posts:—

Registrar	Rs. 1,000–50–1,500.
Assistant Professors	}		Rs. 600–40–1,000–1,000–1,050–1,050–1,100–
Librarian		..	1,100–1,150.

The Council is of the opinion that the Librarian recruited for the above grade should possess a doctor's degree in Science and a qualification in Library Science.

The Council recommends that the grade for the Senior Research Assistants be Rs. 250-25-500 in place of the existing one. The Council also recommends that the grades of Junior Research Assistants and of Technical Assistants be the same as at present.

Para 92 The Council does not recommend any change in the tenure of the posts of Senior and Junior Research Assistants and Technical Assistants.

Para 93 *Accommodation for Staff.*—No comments.

Para 94 *Staff Common Room and Canteen.*—No comments.

Para 95 *Private Practice.*—No comments.

Para 98 *Pilot Plant Work.*—The Council agrees with the recommendations of the Committee.

Paras 105-107, 121-122, 262-264 *Industrial and Production Engineering.*—The Council is of the opinion that the Section of Industrial Engineering and Administration should function in co-operation with the engineering departments, and that the Section of Economics and Social Sciences should form a part of this Section. When the full-time courses are organised, this Section should be developed into a Department. The Council agrees with the Committee that the financial position of the above Section should be reviewed in the light of experience.

As mentioned earlier, the Council considers that the Central Workshop and the Instrument Technology Section should continue to be under the Section of Mechanical Engineering of the Department of Power Engineering.

Paras 127-128 *Maintenance of Buildings, Roads, etc.*—The Council agrees that for black-topping and repairing the roads, a non-recurring grant of Rs. 65,000 be provided.

The Council recommends that over and above the amount at present spent on Annual Repairs of roads and buildings, a sum of Rs. 25,000 per year be provided.

Part III: Work and Development of Individual Departments and Sections

In the light of the above recommendations, the Council suggests that a non-recurring grant of Rs. 31,00,000 and a block recurring grant of Rs. 43,00,000 including working expenses be sanctioned (Annexure).

ANNEXURE

Provision for Block Recurring Grant

Sl. No.	Particulars	Amount per annum
		Rs.
1.	Cost of existing staff (average for the period 1958-59 to 1962-63):	
	Rs.	
	1958-59	20,75,058
	1959-60	21,44,111
	1960-61	22,15,809
	1961-62	22,86,993
	1962-63	23,56,654
	Average ..	1,10,78,625
2.	Average cost of additional posts recommended by the Reviewing Committee	22,15,725
3.	Working expenses	2,63,020
	Provision for additional working expenses	11,41,335
		1,50,000
4.	Cost of Fellowships and Scholarships on the basis of the scheme proposed by the Council	12,91,335
5.	Other items:—	
	5.1. Additional provision for central services like electricity, gas, water, etc.	75,000
	5.2. Director's discretionary grant	30,000
	5.3. Cost of revision in grades	85,160
	5.4. Provision for supernumerary posts	60,000
	5.5. Visits to and exchange of staff with industry	25,000
	5.6. Contribution to the Gymkhana at Rs. 12 p.a. per member	11,500
	5.7. Lump sum provision for strengthening the cadres and alterations in salary scales of Central Office staff	25,000
	5.8. Annual repairs and maintenance of roads and gardens	25,000
	5.9. Provision for Depreciation Fund	1,00,000
		4,36,660
	TOTAL ..	49,48,820
6.	Less: Deduct anticipated receipts from other sources	6,71,640
		42,77,180
	or rounded to Rs. ..	43,00,000

Provision for Fellowships and Scholarships

Post-Doctoral Fellowships

6 Post-Doctoral Fellowships at Rs. 350 p.m. each Rs. 25,200

Research Scholarships in Science Departments

Department/Laboratory	No. of students recommended by the Committee	No. of scholarships at 80%	Amount required per annum at Rs. 200 p.m.
			Rs.
General Chemistry	28	22	52,800
Organic Chemistry	22	16	38,400
Biochemistry	32	26	62,400
Physics	22	17	40,800
Chemical Technology and Chemical Engineering	15	12	28,800
Pharmacology	8	6	14,400
Fermentation Technology	3	3	7,200
Applied Mathematics	3	3	7,200
Economics and Social Sciences	3*	3	7,200
	<u>136</u>	<u>108</u>	<u>2,59,200</u>
Less 10% on account of provision of Scholarships to B.Sc.'s and B.Sc.'s (Hons.) at lower amounts			25,920
			<u>2,33,280</u>

Research Scholarships in Engineering Departments

Department/Laboratory	No. of students recommended by the Committee	No. of scholarships at 80%	Amount required per annum at Rs. 200 p.m.
			Rs.
Aeronautical Engineering	12	10	24,000
Internal Combustion Engineering ..	8	6	14,400
Metallurgy	10	8	19,200
Electrical Engineering	5	4	9,600
Mechanical Engineering	5	4	9,600
Civil and Hydraulic Engineering ..	10	8	19,200
High Voltage Engineering	10	8	19,200
Electrical Communication Engineering..	10	8	19,200
	<u>70</u>	<u>56</u>	<u>1,34,400</u>

Scholarships for Post-Graduate Courses

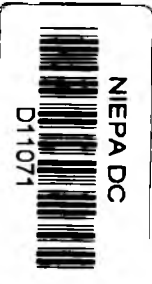
Department	No. of students recommended by the Committee (for 2 years)	No. of scholarships at 60%	Amount required per annum at Rs. 200 p.m.
			Rs.
Aeronautical Engineering	40	24	57,600
Internal Combustion Engineering ..	24	15	36,000
Power Engineering (Electrical) ..	60	36	86,400
Power Engineering (Civil)	30	18	43,200
Power Engineering (Mechanical) ..	30	18	43,200
	<u>184</u>	<u>111</u>	<u>2,66,400</u>

*Scholarships for Instructional Courses
Equivalent to the First Degree*

Course	No. of students recommended by the Committee (for 3 years)	No. of scholar- ships at 25%	Amount required per annum at Rs. 100 p.m.
			Rs.
Metallurgy	90	23	27,600
Electrical Technology	90	23	27,600
Electrical Communication Engineering	90	23	27,600
	<u>270</u>	<u>69</u>	<u>82,800</u>
SUMMARY			Rs.
Post-Doctoral Fellowships			25,200
Research Scholarships—Science Departments			2,33,280
Research Scholarships—Engineering Departments			1,34,400
Post-graduate courses			2,66,400
Other instructional courses			82,800
			<u>7,42,080</u>

Provision for Revision of Grades of Pay

Sl. No.	Post	Present grade	Proposed grade	Average cost of present grade	Average cost of proposed grade	Difference	No. of posts	Total excess cost
				Rs.	Rs.			Rs.
1.	Senior Professors	Rs. 1,000-50-1,500	Rs. 1,600-100-1,800	16,980	22,660	5,680	5	28,400
2.	Registrar ..	Rs. 750-50-1,250	Rs. 1,000-50-1,500	13,510	16,980	3,470	1	3,470
3.	Asst. Professors ..	Rs. 600-40-1,000	Rs. 600-40-1,000-50/2-1,150	12,190	12,460	270	24	6,480
4.	Librarian ..	Rs. 400-25-600	Rs. 600-40-1,000-50/2-1,150	7,950	12,460	4,510	1	4,510
5.	Senior Research Assistants	Rs. 250-10-300-15-450-25/2-500	Rs. 250-25-500	5,870	6,080	210	20	4,200
6.	Foreman, Central Workshop	Rs. 160-10-330	Rs. 300-20-500	4,040	6,260	2,220	1	2,220
7.	Head Mechanics	Rs. 60-4-120-E.B. 5-150	Rs. 120-8-200	2,010	2,880	870	11	9,570
8.	Mechanics ..	Rs. 60-5/2-75-3-105	Rs. 80-5-120	1,720	2,010	290	27	7,830
9.	Asst. Mechanics	Rs. 35-1-40-2-60	Rs. 55-3-85	1,130	1,550	420	44	18,480
								<u>85,160</u>



NIEPA DC
 National Institute of Educational Planning and Administration
 17-B, Sri Aurobindo Marg,
 New Delhi-110 016
 Phone: 24-04